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COMMONWEALTH OF PENNSYLVANIA.

SECOND ANNUAL REPORT

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OF THE

BUREAU OF STATISTICS

OF

PENNSYLVANIA,

FOR THE YEARS 1873-74.

HARRISBURG:
B. F. MEYERS, STATE PRINTER.
1875.

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REMOTE STORAGE

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REPORT.

ASSESSMENT RETURNS FOR 1874.

PERCENTAGE OF INCREASE.

Our first table, prepared from county commissioners' returns, shows how largely the assessments of 1874 have increased over the same, for 1873. The aggregate increase for the State is $598,796,438, or a fraction over fifty per cent. One-third the counties have partaken of this spirit of increase, but especially is this noticeable in Crawford, having increased hers threefold; Northampton, fourfold; Warren, fivefold and Allegheny, sixfold, their former assessments. But these four counties also demonstrate that bringing their valuation up to a cash standard, need not add to their county taxes.

	Assessed value.	County tax.
Allegheny, 1873	$44,313,087	$445,452 21
Allegheny, 1874	282,711,269	424,066 90
Crawford, 1873	8,867,811	123,628 88
Crawford, 1874	23,102,218	115,511 09
Northampton, 1873	13,662,960	114,408 90
Northampton, 1874	48,239,330	77,358 94
Warren, 1873	2,158,080	21,065 56
Warren, 1874	10,421,662	23,205 67

In Allegheny, one and one-half mills was the rate of county tax in 1874, against ten mills in 1873, and so in like manner in all the twenty-two counties in which this increase took place. In some of these an increase of county tax took place, but so did it in other counties where no increase was made in the assessed valuation. Last year the aggregate valuation was, in my judgment, below one-third of the true value. This year the aggregate a little exceeds one-half the true value.

RELATIVE VALUE OF REAL AND PERSONAL PROPERTY.

I suppose that every one admits that in the sense of past legislation and the requirements of the new Constitution personal property should pay an equal percentage upon its value to real estate. It occupies much more of the time of your civil and criminal courts in extending to it protection than does the same value of real estate. Our official assessment will show that not ten per cent. of our personal property can be found upon our assessors' books. The New York State assessors, in their last report, say that not more than fifteen per cent. of theirs is so found. I annex the official assessments of our two adjacent States and our own to demonstrate this:

	Real estate.	Personal.	Ratio.
Pennsylvania	$1,610,333,182	$150,550,485	Not 10 per ct.
New York	1,692,523,071	437,102,215	25 per ct.
Ohio	1,041,763,931	525,510,707	50 per ct.

Now, I have no doubt that if all the personal property of the State was upon the assessors' books, and fairly valued, it would reach ten times the amount or $1,500,000,000. New York allows her citizens to deduct their indebtedness from their schedule of personal property, and gets, in the language of their assessors, not over fifteen per cent. Ohio requires her returns to be made under oath, and hence she is twenty-five per cent. ahead of New York and forty per cent. ahead of Pennsylvania. The only redeeming feature is that our State collects her entire State tax from personal property, or this would be so enormous an evil that it would not be tolerated for a single year. If our personal estate was upon our assessors' books, even as fully as Ohio has hers, it would add to our taxable property $654,000,000, which at two per cent. would yield $13,000,000 annual revenue, just about double the amount of the State tax. I do not believe it is possible, with mankind as they are, to reach an exactly equitable system of taxation; but if you could throw the whole real, personal and corporate wealth of our State into what the English law styles "hotchpotch," and have our entire State, county, city, borough and township taxation, as it exists to-day, paid from a common fund, real estate would be relieved of five millions annually, which would be transferred to personal and corporate wealth. I go out of my province somewhat to put upon record my convictions on this point, because I have had the opposite opinion thrust in my face a thousand times.

OF PROPERTY EXEMPT FROM TAXATION.

I was required by an act of the last Legislature to report the probable amount of property exempted from the payment of taxes. Every county made return, but only fourteen out of the sixty-six counties reported that their assessors' returns shows anything about exempted property; and most of those say that only a few districts returned the value of such exempted property. The returns of at most half a dozen of counties can be relied upon as approximations to accuracy in this respect. Dauphin county shows the heaviest percentage, sixteen per cent., of exempted real estate. Take off, however, one million for the State Capital and public grounds, and the State hospital, and that will leave her exemptions about ten per cent. on her assessments.

This is nearly the same in Philadelphia, and I presume if accurate returns were had from the whole State they would show that about ten per cent. has heretofore been exempt from all taxation. What is to be the policy in the future, under the requirements of the new Constitution, is for the Legislature to decide. Further returns I could not procure, because the value of the exempted property has not heretofore been reported to the county commissioners.

THE TRUE VALUATION OF REAL AND PERSONAL PROPERTY.

I have added a second table wherein is contained my estimate of the true value of real and personal property of the State. How they are to reach this cash value, the legal standard in assessing property, is a knotty question for assessors and county commissioners. In ordinarily prosperous times, I suppose, real estate can be sold at twenty per cent. higher prices, payable in installments, say one-fifth each year, than it can for all cash, payable at the time of sale. If I am right then twenty per cent. below time sales would be the true valuation for assessors and county commissioners. In the past history of our State we have probably all known of actual sales of real estate at five and ten times the assessed valuation. No intelligent man at all familiar with the different counties, can doubt that even our present assessments in many counties are largely below the selling prices. Three of these counties, to wit: Allegheny, Northampton and Warren have, by this last triennial assessment, been brought up to their true value Some twelve others in my table are only a small fraction below their true value. The multiple I have used to bring the others up to this value includes every figure from 2 to 6, and in one county only, Wayne, 8 is my multiplier. This is a matter upon which men differ so much, that all I ask you to believe is that I endeavored to be impartial.

In my second table I have two columns, one testing the present assessment and the other my own estimate by the population of each county. I admit this is only an approximate mode. I have not attempted to equalize, because I know that the cities and old settled counties contain more wealth *per capita* than the younger counties. But Wayne county giving only $54 *per capita*, cannot be up to her true value compared with others that give $1,000. The elements in the table are common sense elements, and every one can make up his own judgment for himself. The law of the State and the oath of office clearly demands property to be assessed at its true cash value. Fully one-half the State in value has come up to or within a fraction of this cash value, and the balance can no longer have any excuse for continuing the old practice, which disregards the law and violates the oath of office.

In regard to personal property, there is not a county in the State that comes anywhere near conforming to the law. Our laws in regard to the subjects of taxation are not essentially different from the laws of Ohio. The new Constitution emphasises the obligation of former laws in this respect. If our laws were executed as the Ohio laws are, instead of $150,000,000, we would have over $800,000,000 of personal property upon the assessors' books, and this too of the active capital which pays its owners six, eight, ten and twelve per cent. annually upon its use. Our Legislature, satisfied from past experience of the impossibility of reaching corporate wealth through the ordinary assessors' books, have taxed this species of property in another form and hold the corporation officers responsible for paying its taxes into the State treasury. In this respect we are ahead of most of the other States. But the requirements of the new Constitution have come into play, and a prolonged contest is likely to ensue about the right to tax in this mode. Then we have five hundred millions of actual capital, such as money at interest, the capital employed by our merchants, manufacturers, mining operators and business men that now nearly escapes taxation. There will be a desperate effort to throw nearly all taxation upon real estate; corporate wealth and active capital will unite to invoke the provisions of the new Constitution to set aside existing laws and the result if successful must be to throw the entire burden upon the real estate of the Commonwealth.

I estimate the taxation of Pennsylvania in 1874, as follows:

County tax, as per returns		$16,804,830 98
School tax, Philadelphia omitted		7,500,000 00
Road tax .... do		6,500,000 00
Poor tax .... do		3,000,000 00
City and borough, extra . . do		3,000,000 00
(Philadelphia return includes all kind of taxes,)		
State tax		6,500,000 00
		43,304,830 98
Share of this paid by personal property,	$3,304,830 98	
State tax	6,500,000 00	
		9,804,830 98
Real estate pays		33,500,000 00

THOMAS J. BIGHAM,

OCTOBER 6, 1874. *Commissioner of Statistics, Pa.*

COUNTY ASSESSMENTS, *indebtedness and taxes of each county, also property heretofore exempted from taxation*

COUNTIES.	I. Total assessed value of real and personal estate. 1873.	II. Asses'd value of real estate as per returns. 1874.	III. Asses'd value of personal estate as per returns. 1874.	IV. Total assessed value of real and personal estate. 1874.	V. Exempt'ns so far as shown by co. com's books. 1874.	VI. Amount of indebtedness as per returns. 1874.	VII. County taxes assessed as per returns. 1874.
Adams	$5,797,395	$10,211,363	$1,156,680	$11,368,043			$34,698 05
Allegheny	44,315,087	277,192,713	5,518,556	282,711,269	$105,000	$2,329,221 73	424,066 90
Armstrong	13,748,113	9,011,670	1,091,205	10,102,875		192,000 00	77,122 86
Beaver	4,905,032	4,560,924	388,572	4,949,496			45,817 00
Bedford	3,044,783	3,867,534	576,687	4,444,221		14,495 00	49,875 68
Berks	20,657,873	19,078,481	2,315,529	21,394,010		75,000 00	106,970 05
Blair	6,487,817	6,987,575	936,860	7,924,435		14,000 00	48,745 55
Bradford	7,628,770	6,877,735	923,953	7,801,688			31,206 73
Bucks	18,494,101	16,417,765	4,980,891	21,398,656			114,955 88
Butler	6,984,136	7,329,113	659,424	7,988,537	100,000	25,000 00	82,409 89
Cambria	5,164,084	4,401,210	542,426	4,943,636		27,800 00	44,012 10
Cameron	833,418	896,516	109,653	1,006,169		10,060 35	10,061 69
Carbon	2,729,887	3,440,575	919,345	4,359,920		61,760 00	56,509 12
Centre	4,412,546	10,585,057	1,238,335	11,823,392			35,410 77
Chester	62,310,273	51,284,718	6,880,033	58,164,751	1,250,000	528,901 00	142,484 81
Clarion	2,631,130	3,420,437	224,596	3,645,033		70,000 00	58,318 67
Clearfield	6,992,246	7,446,392	973,659	8,420,051	276,080	75,000 00	42,100 25
Clinton	3,050,065	4,686,590	736,413	5,423,003		83,000 00	46,865 90
Columbia	5,020,837	4,751,586	957,915	5,709,501			22,838 00
Crawford	8,687,841	21,101,104	2,001,114	23,102,218		359,036 67	115,511 09
Cumberland	16,432,646	11,791,267	1,182,904	12,974,171		4,734 21	68,925 88
Dauphin	15,749,405	15,377,611	696,468	16,074,079	2,579,226	215,634 02	172,932 99
Delaware	32,752,000	31,656,496	6,045,962	37,702,458		485,778 62	121,098 03
Elk	1,776,933	2,176,937	195,302	2,372,239		11,051 00	18,993 72
Erie	38,816,581	37,931,593	2,852,986	40,784,579		16,695 00	142,775 53
Fayette	13,545,243	13,595,615	996,828	14,592,443		5,780 00	50,771 76
Forest	744,713	1,555.575	52,680	1,608,255		24,791 39	16,082 55
Franklin	13,599,828	12,484,820	1,699,736	14,184,556		19,761 00	69,857 41
Fulton	983,247	972,763	145,000	1,117,763			8,870 53
Greene	8,493,198	6.697,250	526,143	7,223,393			32,774 51
Huntingdon	6,158,247	4,766,504	539,078	5,305,582			44,036 01
Indiana	3,820,225	7,875,450	524,259	8,399,709		159,789 37	43,792 95
Jefferson	2,245,782	2,220,270	220,318	2,440,588	28,326	95,000 00	37,608 79
Juniata	1,308,914	2,321,311	169,385	2,490,696		34,000 00	24,906 95

COUNTY ASSESSMENTS, &c.—Continued.

Counties.	I. Total assessed value of real and personal estate. 1873.	II. Asses'd value of real estate as per returns. 1874.	III. Asses'd value of personal estate as per returns. 1874.	IV. Total assessed value of real and personal estate. 1874.	V. Exempt'ns so far as shown by co. com's books. 1874.	VI. Amount of indebtedness as per returns. 1874.	VII. County taxes assessed as per returns. 1874.
Lancaster	$42,559,496	$88,694,492	$14,333,628	$103,028,120	....	$173,722 60	$245,483 30
Lawrence	4,774,378	7,494,361	1,227,033	8,721,394	....	186,822 27	101,450 85
Lebanon	11,781,114	9,892,135	2,215,556	12,107,691	....	17,312 60	58,743 08
Lehigh	10,362,699	37,789,368	1,955,541	39,744,909	....	250,586 31	122,202 54
Luzerne	10,971,927	22,870,258	4,023,853	26,894,111	....	85,000 00	139,152 88
Lycoming	6,548,885	6,318,497	473,388	6,791,885	....	130,307 13	67,918 85
M'Kean	689,675	1,306,939	104,286	1,411,225	....	....	14,112 25
Mercer	20,915,307	21,110,944	2,286,454	23,397,398	....	46,111 42	70,192 19
Mifflin	3,600,000	2,800,000	580,000	3,380,000	....	36,000 00	34,000 00
Monroe	1,445,655	1,390,213	109,309	1,499,522	....	7,145 00	11,996 17
Montgomery	36,732,863	32,517,083	5,617,548	38,134,631	$1,269,175	149,703 98	152,681 80
Montour	2,336,931	2,363,593	300,113	2,663,706	100,000	15,700 00	18,580 30
Northampton	13,663,960	43,927,434	4,311,896	48,239,330	....	8,298 00	77,358 94
Northumberland	7,016,529	6,814,556	429,951	7,244,507	5,625	....	40,959 07
Perry	3,510,000	6,282,024	836,193	7,118,217	....	69,156 00	28,043 62
Philadelphia	511,024,682	539,003,602	47,159,730	586,163,332	58,309,125	42,391,872 17	12,309,429 97
Pike	963,500	841,734	56,456	898,190	445	33,000 00	15,718 33
Potter	1,001,908	1,099,348	118,152	1,217,500	....	27,151 00	12,175 00
Schuylkill	19,595,233	31,289,383	1,104,031	32,393,414	1,473,870	34,825 00	187,963 11
Snyder	3,222,144	3,002,768	639,946	3,642,714	....	....	12,745 45
Somerset	4,049,988	3,478,974	814,772	4,293,746	....	....	32,349 00
Sullivan	594,753	719,718	69,637	789,355	....	2,025 00	7,893 55
Susquehanna	3,562,800	3,108,993	362,265	3,471,258	300,000	10,000 00	28,884 46
Tioga	6,474,689	6,673,257	423,853	7,097,110	150,000	51,861 00	63,873 99
Union	4,956,000	4,015,947	423,148	4,439,095	....	2,800 00	15,536 81
Venango	8,565,793	15,014,655	1,344,607	16,359,262	....	271,000 00	88,000 00
Warren	2,158,080	9,714,091	707,571	10,421,662	....	....	23,205 67
Washington	15,341,367	14,060,161	1,335,494	15,395,655	....	130,000 00	115,467 00
Wayne	1,597,730	1,464,686	329,016	1,793,702	....	....	26,905 53
Westmoreland	8,782,665	26,400,872	2,924,138	29,325,010	....	....	88,002 07
Wyoming	1,475,985	3,857,363	321,187	4,178,550	....	6,500 00	16,714 20
York	12,792,033	39,924,961	4,632,838	44,557,799	....	246,140 03	133,682 39
	1,087,793,844	1,620,214,930	150,550,485	1,770,765,415	65,946,872	49,315,328 87	16,804,830 98

TABLE, *showing population, assessed and true values of real and personal estate, also proportion per capita of the assessed and true values.*

COUNTIES.	Population, 1870.	Total assessed value of real and personal estate, 1874.	Assessed value to each person.....	Multiple to produce the true value..	True value of real and personal estate.	True value to each person........
Adams	30,315	$11,368,043 00	$375 00	2	$22,736,086 00	$750 00
Allegheny	262,204	282,711,269 00	1,078 00	......	282,711,269 00	1,078 00
Armstrong	43,382	10,102,875 00	232 00	4	40,411,500 00	931 00
Beaver	36,148	4,949,496 00	136 00	5	24,747,480 00	684 00
Bedford	29,635	4,444,221 00	149 00	5	22,221,105 00	749 00
Berks	106,701	21,394,010 00	200 00	5	106,970,050 00	1,002 00
Blair	38,051	7,924,435 00	208 00	3	23,773,305 00	624 00
Bradford	53,204	7,801,688 00	146 00	4½	35,107,596 00	659 00
Bucks	64,336	21,398,656 00	332 00	3½	74,895,296 00	1,164 00
Butler	36,510	7,988,537 00	218 00	3½	27,959,879 00	765 00
Cambria	36,569	4,943,636 00	135 00	5	24,718,180 00	675 00
Cameron	4,273	1,006,169 00	235 00	3	3,018,507 00	706 00
Carbon	28,144	4,359,920 00	154 00	4	17,439,680 00	619 00
Centre	34,418	11,823,392 00	343 00	2	23,646,784 00	657 00
Chester	77,805	58,164,751 00	747 00	1½	87,247,126 00	1,121 00
Clarion	26,537	3,645,033 00	137 00	4	14,580,132 00	549 00
Clearfield	25,741	8,420,051 00	327 00	1½	12,630,076 00	490 00
Clinton	23,211	5,423,003 00	233 00	2½	13,557,507 00	584 00
Columbia	28,766	5,709,501 00	198 00	3	17,128,503 00	595 00
Crawford	63,832	23,102,218 00	361 00	1¾	40,428,881 00	633 00
Cumberland	43,912	12,974,171 00	295 00	3½	45,409,598 00	1,034 00
Dauphin	60,740	16,074,079 00	264 00	3½	56,259,276 00	926 00
Delaware	39,403	37,702,458 00	956 00	1⅓	50,269,944 00	1,275 00
Elk	8,488	2,372,239 00	279 00	3	7,116,717 00	838 00
Erie	65,973	40,784,579 00	618 00	1½	61,176,868 00	927 00
Fayette	43,284	14,592,443 00	337 00	2½	36,481,107 00	865 00
Forest	4,010	1,608,255 00	401 00	1½	2,412,382 00	601 00
Franklin	45,365	14,184,556 00	312 00	2½	35,461,390 00	781 00
Fulton	9,360	1,117,763 00	119 00	3	3,353,289 00	358 00
Greene	25,887	7,223,393 00	279 00	2	14,446,786 00	558 00
Huntingdon	31,251	5,305,582 00	169 00	5	26,527,910 00	848 00
Indiana	36,138	8,399,709 00	232 00	3	25,199,127 00	697 00
Jefferson	21,656	2,440,588 00	112 00	5	12,202,940 00	563 00
Juniata	17,390	2,490,696 00	143 00	4	9,962,784 00	572 00

TABLE, SHOWING POPULATION, &c.—CONTINUED.

COUNTIES.	Population, 1870.	Total assessed value of real and personal estate, 1874.	Assessed value to each person.....	Multiple to produce the true value..	True value of real and personal estate.	True value to each person........
Lancaster	121, 340	$103, 028, 120 00	$849 00	1¼	$128, 785, 150 00	$1, 061 00
Lawrence	27, 298	8, 721, 494 00	319 00	2	17, 442, 988 00	638 00
Lebanon	34, 096	12, 107, 691 00	355 00	3	36, 323, 073 00	1, 065 00
Lehigh	56, 796	39, 744, 909 00	682 00	1¼	49, 681, 136 00	874 00
Luzerne	160, 755	26, 894, 111 00	167 00	5½	147, 917, 610 00	920 00
Lycoming	47, 626	6, 791, 885 00	142 00	6	40, 751, 310 00	855 00
M'Kean	8, 825	1, 411, 225 00	159 00	4	5, 644, 900 00	639 00
Mercer	49, 977	23, 397, 398 00	468 00	1¾	40, 945, 446 00	819 00
Mifflin	17, 508	3, 380, 000 00	193 00	4	13, 520, 000 00	772 00
Monroe	18, 362	1, 499, 522 00	81 00	6	8, 997, 132 00	489 00
Montgomery	81, 612	38, 134, 631 00	467 00	1¾	66, 735, 604 00	818 00
Montour	15, 344	2, 663, 706 00	173 00	5	13, 318, 530 00	867 00
Northampton	61, 432	48, 239, 330 00	785 00	......	48, 239, 330 00	785 00
Northumberland	41, 444	7, 244, 507 00	174 00	4	28, 978, 028 00	699 00
Perry	25, 447	7, 118, 217 00	279 00	2	14, 236, 434 00	559 00
Philadelphia	647, 022	586, 163, 332 00	905 00	1¾	1, 025, 785, 831 00	1, 585 00
Pike	8, 436	898, 190 00	106 00	6	5, 389, 140 00	638 00
Potter	11, 265	1, 335, 652 00	118 00	5	6, 678, 260 00	592 00
Schuylkill	116, 428	32, 393, 414 00	278 00	3	97, 180, 242 00	834 00
Snyder	15, 606	3, 642, 714 00	233 00	3	10, 928, 142 00	702 00
Somerset	28, 226	4, 293, 746 00	152 00	4	17, 174, 984 00	608 00
Sullivan	6, 191	789, 355 00	127 00	4	3, 157, 420 00	510 00
Susquehanna	37, 523	3, 471, 258 00	92 00	6	20, 827, 548 00	555 00
Tioga	35, 097	7, 097, 110 00	202 00	2½	17, 742, 775 00	505 00
Union	15, 565	4, 439, 095 00	285 00	3	13, 317, 285 00	855 00
Venango	47, 925	16, 359, 262 00	341 00	2	32, 718, 524 00	682 00
Warren	23, 897	10, 421, 662 00	436 00	......	10, 421, 662 00	436 00
Washington	48, 483	15, 395, 655 00	317 00	3	46, 186, 965 00	952 00
Wayne	33, 188	1, 793, 702 00	54 00	8	14, 349, 616 00	432 00
Westmoreland	58, 719	29, 325, 010 00	499 00	1¾	51, 318, 767 00	873 00
Wyoming	14, 585	4, 178, 550 00	286 00	2½	10, 446, 375 00	716 00
York	76, 134	44, 557, 799 00	585 00	1¾	77, 976, 148 00	1, 024 00
	3, 521, 791	1, 760, 765, 415 00	....	......	3, 425, 325, 415 00	....

HISTORICAL.

Great Britain always claimed what is now Pennsylvania from her discoveries along the Atlantic coast; but there can be no doubt that the first actual exploration of the Delaware Bay was under the auspices of the Dutch East India company bearing the flag of the United Netherlands. The visit of Lord Delaware, (from whom it was named,) Governor of the colony of Virginia, was not until the following year, 1610. Vessels under the auspices of the Dutch occasionally visited the Delaware, and one of them, the Restless, ascending to the present site of Philadelphia, until in 1624 a sort of temporary military government was organized. These explorations and this military occupancy were by the Dutch, subordinate to the government at New Amsterdam, now New York, the principal seat of the Dutch Empire on this continent. The English ambassador at the Hague entered repeated protests against these settlements as encroachments upon the rights of the English crown. The Dutch East India company, however, in the face of these repeated protests, went on to erect forts and trading posts on both sides of the bay, but never conducted them upon the principles of legitimate colonization. Like all money-making corporations, their primary object was to collect revenue from the trade of the native Indians, and any cultivation of the soil was a secondary consideration.

The great Swedish monarch, Gustavus Adolphus, on the eve of the battle of Leutzen, in which he was killed, had left an unsigned proclamation contemplating colonization of the Swedes upon the Delaware in the legitimate sense. This was not actually put in operation until twelve years after his death, to wit: 1638; and then without the vigor that he designed to have infused into his grand scheme of colonization. The Swedes, however, settled upon the west bank of the Delaware over forty years before the Royal Charter to William Penn, and earnestly set to work to cultivate the soil, and in all their intercourse with the Indians acted upon essentially the same pacific principles which became world-renowned under the founder of Pennsylvania. This peaceful policy of the Swedes did not protect them from the more warlike Dutch in 1655, and these latter had to surrender to the more powerful representatives of the English crown in 1664.

Seventeen years later Charles II, in liquidation of a debt of £16,000 due the estate of Admiral Penn, conveyed to his son William the Province of Pennsylvania. The name was given to it by the king, in honor of the admiral and against the consent of the grantee, then only known as a Quaker preacher. William Penn made two visits to this country of about two years each, and was then the actual Governor of the province. He undoubtedly intended to have permanently settled here, and in his will enjoined his heirs to do so. The remaining portion of the thirty-seven years that intervened between the granting of his patent and his death was spent in England. The province was generally ruled by Deputy Governors, appointed by him and subject to removal at his will.

William Penn found the proprietorship of Pennsylvania not by any means a bed of roses. On the death of Charles and the accession of that great friend of his father and of his own, the Duke of York, to the crown, his intimacy with that subsequently deposed monarch had nearly cost him the forfeiture of his province. Quaker preacher as he was, the zealous Protestantism of that age saw in his devoted attachment to the deposed Roman Catholic monarch, disloyalty to William and Mary and the Protestant succession. His province was seized upon by the crown, and for nearly two years he had to vindicate his loyalty before it was restored to him.

The expenses forced upon him by these contests at home and the administration here caused him to declare in one of his letters that Pennsylvania had cost him £30,000 beyond what he ever received in return. In fact, in a despondent mood, on the eve of an apoplectic attack, from which he never recovered, he contracted for £12,000 to convey to the crown the province, for which thirty-one years before he had paid £16,000. The magnanimity of the sovereign refused to enforce the contract against the widow and heirs of William Penn. Judged simply from a financial stand-point, the Pennsylvania Legislature and British Parliament did better for the Penn heirs than the retention of their proprietary rights would have secured them. Pennsylvania granted them £130,000 or about $650,000, and allowed them to retain their manors, forty-four in number, in consideration of the relinquishment of their proprietary rights. And the British Parliament granted them an annuity of £4,000 or some $20,000, which is even to this time regularly paid them. I doubt if an account current of our land department would show a much better exhibit for the Penn heirs.

One other fact connected with the Penn family deserves a passing notice, to wit: That Pennsylvania, during a period of some eight years had a *de jure* female Governor. William Penn, by his will, vested all his proprietary rights in his wife Hannah, who became his sole executrix. Had she removed to Philadelphia she would have been *de facto* Governor of the province. Remaining abroad she exercised her proprietary rights through her deputy, Governor Keith. Several of her letters on public affairs show her to have been a woman of the type of Queen Elizabeth. If she did not box his ears she at least used the sharpest of language to communicate her commands.

The first and most serious controversy in regard to the boundaries of the province was with Lord Baltimore. This included an entire degree of latitude—should the southern line commence at the commencement or end of the fortieth degree of north latitude? Had Lord Baltimore's claim been successful, then the city of Philadelphia and a corresponding strip would have been cut off the southern counties of the State. Had William Penn's claims been allowed, the city of Baltimore and about half of Maryland would have been in Pennsylvania. The result of this was the compromise line, since famous as Mason and Dixon's, for many years the boundary between the free and slave States.

At a later period the authorities of Virginia claimed a large portion of western Pennsylvania, including the site of the present city of Pittsburg. This claim was not ended until after the revolution, and resulted in the extension of Mason and Dixon's line as our southern boundary. About the same time Connecticut claimed the extension of her chartered limits that would have cut off fully one-third the territory of the State. Blood was shed in the valley of Wyoming in asserting and defending these conflicting claims to State jurisdiction. This, too, shortly after the close of the revolution, was settled in favor of Pennsylvania. No accurate census was ever taken of the province of Pennsylvania. The number of inhabitants at the date of the charter to Penn was about twenty-five hundred, mostly Swedes. At the time of William Penn's death, thirty-seven years thereafter, there were probably one hundred thousand in the province, and at the Declaration of Independence about three hundred and twenty-five thousand, and at the date of the first census, 1790, four hundred and twenty-four thousand.

PROVINCIAL FINANCES.

The early history of the colony shows a government conducted on the simplest and most economical principles. Other colonies ruled by royal Governors paid large salaries from the royal exchequer were conducted with considerable pomp. William Penn's Quaker proclivities ignored all worldly pomp, and then he had no means to encourage extravagance. He was forced to be a frequent attendant at court at home, to protect from persecution his co-religionists and also the interests of his colony. This more than exhausted the income of his English estates, and, if his own letters are truthful, the receipts from the sale of lands in the colony were largely more than absorbed by the annual expenditures. Like many other very good men, I believe him to have been an indifferent financier. His letters show him to have been constantly in need of money, and that his estates were heavily mortgaged. Thus situated he was forced to select cheap Governors and all other officers to administer his provincial affairs.

His Governors are said to have received less than a thousand dollars a year from him, and had to rely upon the liberality—or frequently illiberality—of the provincial assembly. If the Governors were kept on starving salaries, of course all below them could not be expected to fare any better.

Things were in this condition during the thirty-seven years that William Penn administered the colony. His mortgaged estates descended to his family thus heavily encumbered. The income derived from the quit rents and sales of land had to be sent to England to extinguish this indebtedness. The result of this condition forced upon all officials rigid economy. In private life Quaker simplicity and Quaker thrift accorded with these public examples. The rapid growth and wonderful prosperity of the colony were largely owing to the good examples set in public and private by its early founders. And, if their descendants of the present day should more closely imitate these virtues of their ancestors, public morality would be largely promoted and private happiness not be materially lessened.

The royal charter to William Penn, which sought to revive in the seventeenth and eighteenth centuries the rights and traditions of the feudal law in the time of the Norman conquest, was a sad mistake ; and scarcely a day passed in the legislative assembly, when its ill effects did not crop out in some form or other. About the middle of the last century commenced that series of disturbances, known as the French and Indian wars, which continued for a period of nearly fifteen years to embroil the peaceful inhabitants of Pennsylvania.

The debt incurred in defending the province during that long period, in proportion to the wealth of the inhabitants, was quite equal to the national debt incurred in suppressing the rebellion to the wealth of the present day. To enable the colony to meet these enormous expenditures, Franklin devised the expedient of a paper currency. Several sessions of the Assembly passed before even this could secure executive approval. But still a tax must be raised to pay the interest and sink the debt. The entire taxable value of the property of the citizens was some six millions of dollars. The Penn family held in their manors, their farms, their houses and lots reserved from sale, the value of fully another million. The great body of unsurveyed wild land it was never proposed to tax. But the serfs and retainers of a feudal Lord had never dared to talk of taxing his estates. A fearful struggle of ten years arose between the provincial Assembly on the one side and the Penn family on the other. Two full volumes of Franklin's works are filled with his writings on behalf of the people. All his tact, his skill and his diplomacy were tasked to their utmost. The contest ended, as all such contests must end in this age, when two hundred thousand are enlisted on the one side, and one family on the other.

The balance of the French and Indian war debt, and the expenditures of the State during the revolution of course tasked the utmost capacity of its financiers of that day. The thrift of Franklin and the skill of Morris carried the infant Commonwealth through the fiery ordeal. The Commonwealth, when fully organized under the Constitution of 1790, still adhered to the frugal habits of its early founders. The following were the annual expenditures of the State, as appears by official reports: 1802, $341,446 12; 1809, $547,950 49; 1820, $440,801 55; 1829, $799,099 10; 1839, $1,621,119 84; 1850, $4,566,300, and since that time something over $5,800,000 per annum, of which nearly $2,000,000 has been interest to pay the public debt. This public debt has been reduced for some years more rapidly than in my judgment wise statesmanship requires it to be. It is largely held by persons and estates that do not desire its principal to be paid. The assets in the sinking fund amounting to $9,500,000 will not be due until 1891. If the present debt was paid off at the rate of one million a year until these sinking fund assets become due, the whole could then be extinguished. A reduction of taxation so as to meet necessary expenditures and one million of reduction is what wise statesmanship requires.

GOVERNORS--COLONIAL AND STATE.

List of Governors of colonies on the Delaware and of the Province and State of Pennsylvania, for 264 years.

DUTCH RULE ON THE DELAWARE.

The Dutch claim to have had possession of both banks of Delaware Bay and river, from Hudson's first visit in 1609, to their surrender to the English in 1664, and again from August, 1673, to November, 1674, when they regained possession. Their chief magistrates were:

Cornelius Jacobson Mey	from	1624	to	1625
William Van Hulst	do	1625	to	1626
Peter Minuet	do	1626	to	1632
David Pietersen De Vries	do	1632	to	1633
Vouter Van Twiller	do	1633	to	1638
Sir William Kieft	do	1638	to	1647
Peter Stuyvesant	do	1647	to	1664

During this last administration there were six deputies under Stuyvesant—part of the time sub-divided into city and company directors. The Dutch surrendered to the English September, 1664.

SWEDES ON WEST BANK OF THE DELAWARE.

Peter Minuet	Governor from	1638	to	1641
Peter Hollander	do...do	1641	to	1643
John Printz	do...do	1643	to	1653
John Pappegoya	do...do	1653	to	1654
John Claude Rysingh	do...do	1654	to	1655

Swedes surrendered to Dutch, September, 1655.

ENGLISH RULE ON THE DELAWARE.

Col. Richard Nichols, Governor at New York, and Robert Needham, Deputy on the Delaware, from 1664 to 1667.

Col. Francis Lovelace, Governor at New York, and Capt. John Carr, Deputy on the Delaware, from 1667 to 1673.

Re-captured by the Dutch, August, 1673, and held to November, 1674, when the English again regained possession.

Anthony Clove, Governor, and Peter Alricks, Deputy, to November, 1674, under the Dutch.

Sir Edmund Andross, Governor at New York, and his Deputies.

Edmund Cantwell, Commander on the Delaware from 1674 to 1676.

John Collier, Commander on the Delaware from 1676 to 1677.

Christopher Billop, Commander on the Delaware from 1677 to 1681.

PROPRIETARY RULE ON THE DELAWARE.

William Markham, Deputy from June, 1681, to October 24, 1682.

William Penn, Governor from October 24, 1682, to August 12, 1684.

Thomas Loyd, President of Council, from June, 1684, to December, 1686.

Five Commissioners appointed by Penn, from 1686 to 1688.

John Blackwell, Deputy Governor from 1688 to 1690.

Thomas Loyd, President of Council, from 1690 to 1691.

Thomas Loyd, Deputy Governor, from 1691 to 1693.

William Penn's "suspected intimacy with the deposed King James" caused William and Mary to forfeit his patent, and ordered Benjamin Fletcher, Governor of New York, to assume for the Crown the Province of Pennsylvania. In August, 1694, however, being satisfied of the injustice done him, William Penn was reinstated in all his rights.

William Markham, Deputy Governor from 1695 to 1699.

William Penn, Governor from November, 1699, to November, 1701.

Andrew Hamilton, Deputy, from November, 1701, to April, 1703.

Edward Shippen, President of Council, from April, 1703, to February, 1704.

John Evans, Deputy, from February, 1704, to February, 1709.

Charles Gookin, Deputy, from February, 1709, to May, 1717.

Sir William Kieth, Deputy, from May, 1717, to July, 1726.

William Penn died July 30, 1718, and his wife Hanna as sole executive for the heirs, became vested with all proprietary rights, and ruled by her deputies for eight years.

JOHN, RICHARD AND THOMAS PENN, PROPRIETORS FROM 1727 TO 1746.

Patrick Gorden, Deputy Governor, from July, 1726, to August, 1736.

James Logan, President of the Council, from August, 1736, to August 1738.

George Thomas, Deputy Governor, from August, 1738, to May, 1747.

RICHARD AND THOMAS PENN, PROPRIETORS FROM 1746 TO 1771.

Anthony Palmer, President of Council, from 1746, to November, 1748.

James Hamilton, Deputy Governor, from November, 1748, to October, 1754.

Robert Hunter Morris, Deputy Governor, from October, 1754, to August, 1756.

William Denny, Deputy Governor, from August, 1756, to October, 1759.

James Hamilton, again Deputy Governor, from October, 1759, to November, 1763.

John Penn, Deputy Governor, from November, 1763 to 1771.

James Hamilton, President of Council, 1771.

THOMAS AND JOHN PENN, PROPRIETORS FROM 1771 TO 1776.

Richard Penn, Lieutenant Governor, from October, 1771, to August, 1773.

John Penn, Deputy Governor, from August, 1773, to July, 1776.

A committee of public safety, Benjamin Franklin, Chairman, voluntarily chosen in 1775, were *de facto* the government until the Constitution of 1776 was adopted, and an organization completed under it. John Penn continued to live here during the Revolution and until his death in 1795; his remains were interred in Christ church-yard, in Philadelphia, but were removed by his family afterward to England.

On November 27, 1779, the Legislature vested the Penn proprietary interests in the Commonwealth, paying the family however, £130,000 or about $650,000, and allowing them to retain their manors, forty-four in number, worth probably as much more, also their private estates.

The English Parliament in 1790, granted to the Penn family an annuity of £4,000 or $20,000, in consideration of the services of William Penn and losses by his family, and this annuity is regularly paid up to this time, 1873. The Chancellor last year, on being interrogated, saying that the government had no intention of suspending this payment.

CONSTITUTION OF 1776.

By this Constitution the Presidents of the Executive Council were Governors—

Thomas Wharton, President, March 5, 1777, to his death, May 23, 1778.

George Bryan, Acting President, May 23, 1778, to December 1, 1778.

Joseph Reed, President, December 1, 1778, to October 8, 1781.

William Moore, President, November 14, 1781, to October 8, 1782.

John Dickinson, President, November 7, 1782, to October 18, 1785.

Benjamin Franklin, President, October 18, 1785, to October 14, 1788.

Thomas Mifflin, President, November 5, 1788, to December 20, 1790.

GOVERNORS UNDER THE CONSTITUTION OF 1790.

Thomas Mifflin, three terms, from December 20, 1790, to December 17, 1799.

1790. First election, Thomas Mifflin, 27,725; Arthur St. Clair, 2,802.

1793. Second election, Thomas Mifflin, 18,590; F. A. Muhlenberg, 10,706.

1796. Third election, Thomas Mifflin, 30,029; F. A Muhlenberg, 10,011.

Thomas M'Kean, three terms, December 17, 1799, to December 20, 1808.

1799. First election, Thomas M'Kean, Democrat, 38,036; James Ross, Federal, 32,641.

1802. Second election, Thomas M'Kean, Democrat, 47,879; James Ross, Federal, 17,037.

1805. Third election, Thomas M'Kean, Independent Democrat, 43,644; Simon Snyder, Democrat, 38,878.

Simon Snyder, three terms, December 20, 1808, to December 11, 1817.

1808. Simon Snyder, Democrat, 67,975; James Ross, Federal, 39,575; John Spayd, 4,006.

1811. Simon Snyder, Democrat, 52,319; Wm. Tilghman, Federal, 5,248.

1814. Simon Snyder, Democrat, 51,099; Isaac Wayne, Federal, 29,566; G. Littimore, 910.

Wm. Findlay, one term, December 17, 1817, to December 19, 1820.

1817. Wm. Findley, Democrat, 66,331; Joseph Hiester, 59,272.

Joseph Heister, one term, December 19, 1820, to December 16, 1823.

1820. Joseph Heister, Federal, 67,905; Wm. Findley, Democrat, 66,300.

John Andrew Shulze, two terms, December 16, 1823, to December 16, 1829.

1823. John Andrew Shulze, Democrat, 89,928; Andrew Gregg, Federal, 64,211.

1826. John Andrew Shulze, Democrat, 72,710; John Sergeant, Federal, 2,349.

George Wolf, two terms, December 16, 1829, to December 15, 1835.

1829, George Wolf, Democrat, 78,219; Joseph Ritner, Anti-Mason, 61,766.

1832. Geo. Wolf, Democrat, 91,335; Joseph Ritner, Anti-Mason, 88,165.

Joseph Ritner, one term, December 15, 1835, to January 15, 1839.

1835. Joseph Ritner, Anti-Mason, 94,023; George Wolf, Democrat, 65,804; Henry A. Muhlenberg, 40,586.

GOVERNORS UNDER THE CONSTITUTION OF 1838.

David Rittenhouse Porter, two terms, January 15, 1839, to January 21, 1845.

1838. David Rittenhouse Porter, Democrat, 127,821; Joseph Ritner, Anti-Mason, 122,325.

1841. David Rittenhouse Porter, Democrat, 136,504; John Banks, Whig, 113,473; and F. J. Lemoyne, Abolitionist, 763.

Francis Rahn Shunk, twice elected, January 21, 1845, to July 9, 1848. Governor Shunk resigned July 9, 1848, and died shortly thereafter.

1844. F. R. Shunk, Democrat, 160,322; Joseph Markle, Whig, 156,040, and F. J. Lemoyne, Abolitionist, 2,566.

1847. F. R. Shunk, Democrat, 146,081; James Irwin, Whig, 128,148; E. C. Reigart, Native American, 11,247, and F. J. Lemoyne, Abolitionist, 1,861.

William Freame Johnston, July 9, 1848, to January 20, 1852.

1848. William F. Johnston, Whig, 168,522; Morris Longstreth, Democrat, 168,225,

William Bigler, one term, January 20, 1852, to January 16, 1855.

1851. William Bigler, Democrat, 186,489; W. F. Johnston, Whig, 178,034, and Kimber Cleaver, Native American, 1,859.

James Pollock, one term, January 16, 1855 to January 19, 1858.

1854. James Pollock, Whig, 203,822; William Bigler, Democrat, 166,191, and B. Rush Bradford, Native American, 2,194.

William Fisher Packer, January 19, 1858, to January 15, 1861.

1857. William F. Packer, Democrat, 188,846; David Wilmot, Free Soil, 146,149; Isaac Hazelhurst, Native American, 28,168.

Andrew Gregg Curtin, two terms, January 15, 1861 to January 15, 1867.

1861. A. G. Curtin, Republican, 262,346; Henry D. Foster, Democrat, 230,239.

1863. A. G. Curtin, Republican, 269,506; G. W. Woodward, Democrat, 254,171.

John White Geary, two terms, January 15, 1867, to January 21, 1873.

1866. J. W. Geary, Republican, 307,274; Heister Clymer, Democrat, 290,096.

1869. J. W. Geary, Republican, 290,552; Asa Packer, Democrat, 285,986.

John F. Hartranft, January 21, 1873, to January, 1876.

1873. J. F. Hartranft, Republican, 353,387; Charles R. Buckalew, Democrat, 317,760.

CONSTITUTIONS—COLONIAL AND STATE.

Charles II, of England, in March 1681, by his charter to William Penn, vested in him, in accordance with the doctrines of the feudal law, all the rights, powers and so forth which we now recognize as inherent in the citizen. In exact accordance with this theory was William Penn's first grant called "concessions to purchasers of lands" in twenty sections, dated July 11, 1681. This was followed, April 11, 1682, by his frame of government in twenty-four sections, in the preamble to which he expressly disavows all authority over his colonists, except such as could be proved by the Christian Scriptures. His laws in forty sections followed while still in England, and upon his arrival upon the Delaware, at the first Assembly at Old Chester, all these were ratified, and in addition thereto his great law in sixty-nine sections was enacted. These constituted not in form, but in substance the Colonial Constitution under which the province grew and flourished until the date of the American revolution. We presume that the members of the Constitutional Convention of 1872–3 had carefully studied this Penn's Constitution, as both documents contain about in equal proportions constitutional principles and legislative enactments. This Constitution was modified in some of its details by William Penn in 1683–1696, and most of all on his second visit to the province in 1701, and by still more important unwritten amendments, after the manner of the English Constitution, wrested from the Penn family by the persistent demands of the Colonial legislative assemblies. The most important of these unwritten concessions was the right to pass laws organizing the judicial branch of government; to issue paper money, and above all the right to tax the proprietary estates to defray the public expense. This aggregate of constitutional law, written and unwritten, was the inheritance of our ancestors for nearly a century; about equal in time to the four Constitutions of the Commonwealth.

The first Convention to form a Constitution in our modern sense of that term met in Philadelphia July 15, 1776. Of that Convention Benjamin Franklin, then in the seventy-first year of his age, but in the fullest enjoyment of his intellectual faculties, was the president, and tradition has always assigned to him the chief agency in its preparation. The classification since adopted in the national Constitution of 1787 into articles, these subdivided into sections, now almost universally followed, had not then been devised. This Franklin Constitution was about one-third shorter than that of 1790, one-half shorter than that of 1837–8, and about one-fifth the length of 1872–3. I very much doubt if the political wisdom of these latter days has kept equal pace with the number of sections of these later charters of our liberties. The peculiarities of this Franklin Constitution were: Instead of a Governor, all executive powers were vested in a council of twelve; no Senate; all legislative powers were in a single Assembly, and a council of censors, elected every seven years, to see that all other departments confined themselves to their proper spheres.

The second Constitutional Convention assembled November 24, 1789, continued in session until the 26th of February, 1790, and then adjourned until August 9, and finally proclaimed its Constitution adopted September 2, 1790. This Constitution was modeled in its arrangement and grant of powers after the national one, then recently adopted, and undoubtedly gave more satisfaction than any other our State has ever had. It was our fundamental law for forty-eight years, and an attempt made in 1825 to call a new Convention was largely defeated.

The Convention of 1837–38 only attempted to amend the Constitution of 1790. It took from the Governor the appointment of county officers, and made all these elective by the people, inserted the word *white* to limit the elective franchise, and made the judicial department to hold office for ten and fifteen years, instead of for life, as under the Constitution of 1790. Yet these moderate changes only secured their adoption by the people by a majority of a few votes over twelve hundred. This Constitution also provided a mode of amendment by the action of two succeeding Legislatures and adoption by a vote of the people. This, it was then supposed, would render all future conventions unnecessary. By this agency the judiciary was made elective by the people in 1850; the State, county, and municipal authorities were forbidden to subscribe to the construction of internal improvements in 1857; and the soldiers in the field, in time of war, were guaranteed the right of suffrage in 1864. The people, not satisfied with this slow, piece-meal mode of amendment, provided for a new convention to amend the old, or to create a new Constitution for the State. Hence came into existence the Convention of 1872–73, which sat for nearly a year, and has produced a new Constitution more than equal in length to all the Colonial and State Constitutions which preceded it. The people of the State have just adopted this new Constitution by a vote unprecedented in her history, and I hope its administration may demonstrate it to be an instrument as much superior in its political guarantees as in length it surpasses its predecessors. The historian should rarely attempt to write of passing events; hence I shall not risk my reputation as prophet by attempting to tell you of its wise and multifarious provisions.

THE PENN MANORS.

The Royal Charter vested in William Penn and his heirs the absolute ownership of the soil of Pennsylvania. From 1681, the date of the charter, to July 4, 1776, the date of the Declaration of Independence, all titles had to be derived from the Penn family; and within the reserved manors since all titles have still to be traced to them.

The Surveyor General, under the Penns, had selected and surveyed off some forty-four manors for the more exclusive use of the proprietors. A list of these, as accurate as the Land Office can furnish, with their contents, compose the first table. Large portions of these manors had been disposed of before the Revolution, especially in Eastern Pennsylvania. How much remained unsold in 1776 I have no means of learning.

William Penn, by his will, had left to each of his children ten thousand acres of land in Pennsylvania, and at various times some of the family had assigned to them portions of land. These are the "private estates" referred to in the act of 1779, and are, as far as the Land Office is informed, covered by the second table.

The Legislature passed an act on the twenty-seventh of November, 1779, in consideration of one hundred and thirty thousand pounds sterling, (or six hundred and fifty thousand dollars,) vesting in the Commonwealth all the proprietary rights, under the Royal Charter; reserving, however, to the Penn heirs, their manors surveyed and returned prior to July 4, 1776, and their private estates—meaning, I presume, all property which had been severed from the general proprietary estate, and vested in any one or more members of the Penn family. The eighth and thirteenth sections are as follows:

"VIII. *Provided also, and be it enacted,* That all and every the private estates, lands and hereditaments, of any of the said proprietaries, whereof they are now possessed, or to which they are now entitled, in their private several right or capacity, by devise, purchase or descent; and likewise all the lands called and known by the name of the proprietary tenths or manors, which were duly surveyed and returned into the Land Office, on or before the fourth day of July, in the year of our Lord one thousand seven hundred and seventy-six, together with the quit or other rents and arrearages of rents, reserved out of the said proprietary tenths or manors, or any part or parts thereof, which have been sold, be confirmed, ratified and established forever, according to such estate or estates therein, and under such limitations, uses and trust, as in and by the several and respective reservations, grants and conveyances thereof, are directed and appointed.

"XIII. *Be it further enacted,* That the sum of one hundred and thirty thousand pounds, sterling money of Great Britian, be paid out of the Treasury of this State, to the devisees and legatees of Thomas Penn and Richard Penn, late proprietaries of Pennsylvania, respectively, and to the widow and relict of the said Thomas Penn, in such proportions as shall hereafter by the Legislature be deemed equitable and just, upon a full investigation of their respective claims."

So far as our information goes, we give such a designation of the county and neighborhood in which these manors lie as will enable our readers to form some idea of the location and value of these Penn estates:

List of Manors *laid out by the Penn family and reserved by them by settlement of* 1779.

NAME.	QUANTITIES.		LOCATION.	REMARKS.
	Acres.	Perches.		
Springettsburg	1,840		Philadelphia	The family name of Wm. Penn's first wife was Springett. His eldest son was also named Springett. This manor and some others were named to compliment his wife's family and his son.
Springfield	4,010		Philadelphia.	
Gilberts	4,095		Philadelphia, (now Montgomery,)	On the Schuylkill, near Phœnixville.
Callowhill	5,000		Chester county	Thomas Callowhill was one of the purchasers of 5,000 acres from Wm. Penn, 22d March, 1682. A street in Philadelphia also commemorates him. William Penn's second wife was a daughter of Thomas Callowhill.
Amorland of Bilton	2,850		Do.	
Letitia Aubrey's	5,000		Do	William Penn's daughter, Letitia, married William Aubrey.
William Penn	5,000		Do	A township called Pennsbury probably designates the location of this manor.
Faggs	7,175		Do.	
Springton	10,000		Do	This name is probably a derivation from the Springett family.
Highland	7,750		Bucks county.	
Richland	16,749		Do	A township by this name, in northern part of Bucks county, indicates the location of this manor.
Pennsbury	8,431		Do	This manor was on the bank of the Delaware, above Bristol, and is said to have been, at one time, designed by William Penn to have been the site of his great city, afterwards changed to Philadelphia. He there built a family mansion, in which he resided during his second visit to his Province.
Perkissey or Perkaise	11,462		Do.	
Wallenpaupack	12,150		Do. (now Wayne,)	A stream forming the boundary line between Wayne and Pike counties designates the location of this manor. This creek has, near its mouth, a succession of cataracts, and falls a distance of 150 feet in 1⅓ miles.
Ruscomb	10,000		Berks county	A township known as Ruscomb Manor, in Berks county, marks the location of this manor.
Tulpehocken	7,510		Do	In the north-western part of Berks county two townships, Upper and Lower Tulpehocken, designate the location of this manor.
Antolhough	5 w'ts of R. Penn.		Lancaster county	The number of acres in this manor is not given. These five warrants were most likely issued to Richard Penn about the time of the Revolution, and probably contained about 5,000 acres.
Conestoga	16,000		Do	This large body of land lay on both sides of the Conestoga creek. Two townships, one Manor and the other Conestoga, designate its location.
Charles Fells	10,000		Do	This manor was situated near the line of Berks and Lebanon counties, on the Tulpehocken creek. Named from Charles Fells, who married a grand-daughter of William Penn.
Freame's	10,000		Do. (now Schuylkill,)	A grand-daughter of William Penn married Thomas Freame.
Hempfield	2,816		Do	Two townships in Lancaster county, East and West Hempfield, indicate the location of this manor.
Little Swatara	5,000		Do. (now Schuylkill,)	The creek by this name, in the western part of Schuylkill county, designates the location of this manor.
Louther	7,557	78	Cumberland county	The borough of Carlisle is said to be located within what was this manor.
Maske	(15,000)		York county, (now Adams,)	The number of acres in this manor is not given. The manor was a large one, including all of Cumberland and most of Straban townships, Adams county, containing probably not less than 15,000 acres.
Yorktown	421	30	Do	A part of Springettsburg.
Springettsburg	64,520		Do	These two manors contained a great body of magnificent land around the borough of York, upon the Codorus creek.
Lechawaxin	80,000		Northampton county, (now Pike,)	This tremendous large manor, formerly in Northampton county, (now Pike,) and probably a portion in Wayne county, lies upon a stream of the same name.
Stoke	9,800		Northumberland county	This manor was undoubtedly designed to commemorate a country seat near London, formerly by name of Stoke Pogis, the residence of Lord Coke, which afterwards came into the Penn family.
Sunbury	20,000		Do	This manor included that fine body of land at the junction of the North and West Branches of the Susquehanna, on which the borough of Sunbury is located.
Amsterdam and Rottendam	2,770		Do.	

List of Manors—*Continued.*

NAME.	QUANTITIES.		LOCATION.	REMARKS.
	Acres.	Perches.		
Pomfret	4,766	…………	Northumberland county	Thomas Penn, son of the proprietor, married a daughter of the Earl of Pomfret. This manor was named to compliment the Earl.
Muncy	1,802	141	Do…………(now Lycoming,)	A town by this name designates the location of manor. This whole neighborhood was originally settled by Quakers.
Dundee	3,520	…………	Do…………(now Bradford.)	
St. Davids	3,092	…………	Do	This was probably designed to compliment a famous Welsh Quaker, Hugh David, who accompanied Wm. Penn to this country on his second visit, and who presented to Thomas Penn, in 1732, some verses tracing the Penn family as a branch of the Royal Tudors.
Penn Grove	4,545	…………	Do.	
Kittanning	3,960	…………	Westmoreland co., (now Arms'g,)	The famous Indian town, Kittanning, now the county seat of Armstrong county, captured by Col. Armstrong, in 1756, from the Indians, is located upon this manor.
Denmark	4,861	…………	Do	This manor is situated on Bushey Run. The Pennsylvania railroad, by naming a station "Manor," designates its location. Col. Bouquet's battle was fought August, 1763, within this manor.
Penn's Lodge	5,568	…………	Do	In the southern part of the county Sewickley creek and township mark its location.
Pittsburgh	5,766	…………	Do…………(now Allegheny,)	The city of Pittsburg occupies mainly the site of this manor. This is now probably more valuable than any of the others. A recent assessment board has assessed its value at $176,147,774.
Cherry Hill	1,202	40	Do…………(now Indiana,)	A township in the northern part of Indiana county by that name indicates the location of this manor.
Chest	1,123	113	Do…………(now Cambria,)	The location of this manor is designated by a township of the same name in the northern part of Cambria county.
Nottingham	1,035	80	Do…………(now Washington,)	In the north-east part of Washington county a township by same name marks its location.
Bedford Fort	2,810	80	Bedford county	Bedford, the county seat of Bedford county, is situated upon this manor; also the famous Bedford Springs.
Sinking Valley	9,056	…………	Do…………(now Blair,)	The location of this manor is indicated by a post office of same name in Blair county.
	421,015	82		

LISTS OF LANDS, *other than Proprietary Manors, owned by members of the Penn family.*

NAME.	QUANTITIES.		LOCATION.
	Acres.	Perches.	
Safe Harbor	2,222		Wayne county—situated on the west side of the Delaware, at the mouth of Equinunk creek.
Damascus	4,390	80	Northumberland county, at Coshictung.
	2,770	30	Wayne county, (formerly Northumberland county.)
William Penn, Jr.	5,214	139	........do........ warrant 1683. Lechawaxin and Equinunk creeks. Re-surveyed for Peter Gaskill. Pat. 7th June, 1806.
The Meadows	3,032	90	........do........ (formerly Northumberland county.) East side of Moosie Wt's, on waters of Lechawaxin creek.
The Mill-Seat	999	155	........do..................do ....On most southerly branch of Equinunk creek, 5½ miles from Delaware.
Duck's Harbor	510	25	........do..................do ....On head-waters of Little Equinunk creek, 5 miles from Delaware.
Fox Harbor	1,649	23	........do..................do ....On east branch of Lichawaxin.
Beaver Harbor	665¾		On Beaver pond, branch of Quacake creek, 100 perches west of Nescopeck path, near the line of Carbon and Luzerne counties.
Cowpasture	3,603		Schuylkill county, on the most westerly branch of the Tamaqua or L. Schuylkill.
Pleasant Garden	20,948	56	Wayne county, on Big Middle creek, a westerly branch of Lackawaxin creek.
Sandy Run	1,280	40	Wayne county, on east branch of Lackawaxin, called Sandy run, 10 miles from Delaware.
Terrapin Harbor	839½		On Terrapin creek, north side of Broad Mountain, on path from Gattenhutten to Wyoming, near line of Luzerne and Carbon.
Brewer's Den	312	48	Wayne county, on a branch of Equinunk creek.
Shohocking	520		Wayne county, on west side of Delaware, at mouth of Popautunk.
Elk Forest	11,526		Wayne county, on waters of Lackawaxin and Big Middle creek.
	12,200		Berks county, between Ruscomb Manor and Reading.
	549		Brecknock township, Berks and Lancaster counties.
	1,272		Dauphin county, on the Susquehanna and Paxton creek.
The Indian Landing	1,866		Susquehanna county, on the North-East Branch of Susquehanna, opposite mouth of Owego.
Crooked Dale	1,026		Susquehanna county, on the North-East Branch of Susquehanna.
Job's Discovery	1,615		Lycoming county, on West Branch river, at the mouth of Muncy creek.
	2,571	40	Huntingdon county, on head-waters of Shavers's and Standing Stone creeks.
Highland	763		Huntingdon county, south-east side of Tussey's Mountain and north-west side of Warrior Ridge.
	2,473½		Huntingdon county, in Warrior valley, north-west side of ridge and south-east side of Cove Mountain.
	1,497		Blair county, two miles above Frankstown.
	466	70	Huntingdon county, on head of Water Street.
Lake Paupunauming	215		Monroe county, in Hamilton township, (lake 190 pr. long.)
Vineyard	2,000		On Andenelia creek, sixty miles from Philadelphia.
	88,997	276	
Manors	421,015	82	
Total	510,012	358	

The passage of this act was undoubtedly the highest act of sovereignty ever exercised by any State Legislature. Our ancestors of 1776 were not timid men. During the revolution, our State Legislature passed numerous acts forfeiting the estates of those whom they called tories or traitors. In later days we all remember what a howl was raised when Thaddeus Stevens and other earnest men asked Congress to confiscate the estates of armed rebels. But the tories had a far better excuse than our modern rebels. They said they only wanted to continue the old order of things. But our modern rebels overturned the existing order of things; rebelled against the mildest form of government ever known, and set up another in opposition thereto. Had Congress ordered them to be hanged and their estates confiscated, a thousand precedents would have justified it, and among others, Pennsylvania in our revolutionary days.

In case of the Penn estates, the act was a generous one. John and Richard Penn had remained here during the Revolution, their sympathies being known to be with the mother country. They knew that plenty of precedents existed to warrant the confiscation of all their proprietary rights and estates. Hence they and the other members of the Penn family gladly accepted this tender by the Legislature. In fact we do not believe that any injustice was done the Penn heirs by this act of confiscation as some have called it. Each one can form his own idea of the value of the manors and lands reserved them in the foregoing schedules. If wisely managed they ought to have realized a million of dollars from them, and then they were paid in cash $650,000. And the British Parliament by an act in 1790, in consideration of their losses in Pennsylvania and the eminent services of their ancestors, granted them an annuity of £4,000 sterling or $20,000 of our money This has been regularly paid them eighty-three years and amounts to $1,660,000. Now, if Wm. Penn's letters were true, complaining that during his life-time the care of his Province had cost him more than he had ever realized from it, then certainly his heirs made a capital bargain with our Commonwealth and the British Parliament.

William Penn originally received the grant of this province in consideration of £16,000 owed his father, Admiral Penn, for services and advances. And yet, thirty-one years thereafter, on the eve of his apoplectic attack, from which he never recovered, he contracted to release all his rights in consideration of £12,000 to be paid him by the crown. This contract was not enforced against his heirs, and certainly they fared five hundred times better by the Pennsylvania Legislature and the British Parliament These Penn manors were intended to be, and I have no doubt were, the choicest lands in the province at that early day. What the improvements of a century, the growth of cities and towns, the opening of mines, the erecting of manufacturing establishments, the location of canals and railroads, may have since done, is another question. When made, these Penn lands were believed to be the garden spots of the then province, now State of Pennsylvania.

The Penn family have always had—probably still have—an agency in Philadelphia for the management and sale of their lands. Your Harrisburg Land Office has only the outside lines of these manors. The subdivision of them into lots or farms can alone be ascertained by referring to the Penn surveys. I suggest that the Surveyor General be authorized by the Legislature to see if the records now in the possession of the Penn agents cannot be transferred to your Land Department for reference in all questions of title. These records will soon become an encumbrance to the Penns, and ought to be deposited where they might be accessible in all controversies in regard to titles within these manors. In one form or other probably one-tenth the titles to real estate in the Commonwealth go back to the Penn records for their origin.

THE CAPITALS AND PUBLIC GROUNDS.

Old Chester, below Philadelphia, was undoubtedly the first capital of our State. There William Penn, in December 1682, presided in the first Legislative Assembly of the Province, adopted the first Constitution and his great law in sixty-nine sections. The house in which they met, occupied as a cooper-shop, and the "Old Oaken Chair," in which William Penn sat as Speaker, were still to be seen a few years since. With this solitary exception, however, Philadelphia was the capital of the State during the entire period of the proprietary government. The legislative assembly was accustomed to meet most frequently at "The Great Meeting House" of the Friends, until in 1707 a court house was built. This continued the Capitol until the modern State House, containing Independence Hall, was built in 1734. The legislative assembly occupied what is known as Independence Hall. The sittings of the proprietary council were in the second story. The use of the Legislative Chamber was granted to the Colonial Congress, and since the fourth of July, 1776, is known as the Hall of Independence. The approach of the British army in 1777, warned the Executive Departments to remove elsewhere, and Lancaster was the seat of State government until the withdrawal of the British army in June, 1778, permitted the Executive and Legislative Departments again to return to Philadelphia. That city is the place in which all four of our State Constitutions have been agreed upon. The entire sessions of the Constitutional Conventions of 1776–90 were held there, the earlier sessions of the Constitutional Conventions of 1837–8, and 1872–3 were held in Harrisburg but adjourned to Philadelphia, and both Constitutions were finally agreed upon there.

The public sentiment of this country appears to have fixed that the State Capitols should not be located in large commercial cities. With the exception of Massachusetts and Virginia, subordinate towns, located in the interior of the States and at some considerable distance from the great commercial centres have been selected. I suppose that it was this feeling which prompted our Legislature in 1799, to order the removal of all departments to Lancaster where the Legislature in December of that year met. The location of the State Capital, at Lancaster, does not appear to have been regarded at any time as a permanent one Almost every session of the Legislature was agitated with this question. The chief points urged were Philadelphia, Carlisle, Harrisburg and Northumberland. Finally in February, 1810. Harrisburg was fixed upon as the place and October, 1812, as the time when the Executive Departments should be removed there. John Harris, the founder of Harrisburg, on the 6th of July, 1785, had conveyed to trustees four acres and twenty-one perches of land in trust for a State Capitol. This ground constitutes the eastern end of the public square upon which the arsenal has heretofore stood. The ten acres of the western end of the public square was purchased from William M'Clay by deed dated 17th May, 1810, in consideration of one hundred dollars per acre. This one thousand dollars was understood to be for the use of the sisters of Mr. M'Clay for interests held by them. Mr. M'Clay being a large land holder, of what was known at that day as M'Claysburgh, made a donation of his interest to secure the location of the capitol. An intervening strip of ground between the M'Clay and Harris property was purchased for eleven hundred dollars. Within the last year (1873,) a triangular block, bounded by Walnut and Fourth streets, adjacent to the old arsenal, has been vested in the State by proceedings in the Dauphin county court. The amount of ground thus acquired is a little less than one acre; but a brewery and a number of dwelling houses situated upon it, caused the viewers to assess its value at forty-nine thousand seven hundred dollars, and the costs added thereto increased the amount to fifty thousand dollars. The public square contains nearly fifteen acres; and the original cost to the Commonwealth was something over fifty-two thousand dollars. The two wings of the capitol designed for the accommodation of the public officers were first built. The appropriations for these were as follows:

By act 21st February, 1810	$30,000 00
" 28th March, 1811	30,000 00
" 10th March, 1812	13,000 00
By resolution 25th June, 1839	10,000 00
" 21st April, 1840	2,300 00
	85,300 00

The records of the accounting department, including no doubt, some extras and the re-fitting and furnishing, add a few thousand dollars to the above. An act of 2d March, 1813, appropriates thirteen thousand dollars for fire proof departments.

STATE CAPITOL PROPER.

By an act of 18th March, 1816	$50,000 00
By an act of 27th February, 1819	70,000 00
	120,000 00

With a proviso that the entire Capitol should not cost more than	$120,000 00
The act of 18th March, 1820, appropriated	15,000 00
The entire cost of Capitol proper	135,000 00

The architect and contractor for the building of the Capitol, was Stephen Hill. The work was executed in a substantial style, with very little ornament, probably in exact accordance with the taste of that day. The public offices, I believe, were completed for occupancy on the first of October, 1812. The corner stone of the Capitol proper was laid by Gov. Findlay on 31st May, 1819. The legislative halls were first occupied by the Senate and House on January 2, 1822. I have before me a programme of the proceedings of that day, showing a grand procession, in which the architect and his workmen, the clergy, the Governor and heads of departments, the Speakers, members and officers of the Senate and House of Representatives, judges, civil authorities and citizens of Harrisburg generally, took part in the proceedings.

By an act of 30th March, 1821, $15,000 was appropriated for furnishing. The old Arsenal, about being removed, cost $12,000. The Executive Department for some twenty years, occupied the room now used by the Adjutant General. The State Library, until about eight years since, occupied the rooms now used by the School Department. The grounds originally inclosed, were about the M'Clay purchase. The whole of the public square was not inclosed with the iron fence, until about 1854 or 1855. It is difficult to separate, exactly, the permanent improvements from those of a mere transient character. The following figures are not intended to include the salaries paid to the Superintendent and watchmen of the public grounds, or the Harrisburg gas and water companies for supply of water and gas.

The amount expended on what I regard as permanent improvements, is as follows :

From 1823 to 1843	$25,807 73
From 1843 to 1853	16,250 60
From 1853 to 1863	35,984 00
From 1863 to 1873	46,975 00
	125,017 33

Until about 1857 the State owned no Executive mansion. At that time a house was purchased for the Executive at a cost of about $10,000. About five years thereafter this was exchanged for the present Executive mansion, the State paying ten thousand and the city or citizens of Harrisburg paying twenty thousand dollars. The building has since been about doubled in its capacity at a cost to the State, as near as I can ascertain, of about $44,000. The extension of the Capitol for the Library and committee rooms was authorized by act of 1864. The expenditure as near as I can ascertain for the extension, was $88,000, and for furnishing the same about $25,000. The extension of the western wing and the improvements in the Executive and Treasury Departments, during 1873–4, I have not been able to ascertain, probably about $20,000. The last Legislature ordered the removal of the old arsenal and the purchase of ground and the erection of a new one for which $35,000 was appropriated. It also ordered the enlargement of the Capitol to accommodate the Legislature as fixed by the new Constitution. In the progress of that work it was found that portions of the old timbers were decayed ; and hence an over-hauling of the Capitol building is in progress. By the time the whole is closed, I should think $40,000 would be a reasonable estimate of the expense. An account current by the Commonwealth of its whole expenditure would, if I am right, stand as follows :

Fifteen acres of ground	$52,000 00
The eastern and western wings of Capitol	118,300 00
The Capitol proper and furnishing	150,000 00
The old and new arsenals	47,000 00
The Exective mansion	64,000 00
The Library extension and furniture	113,000 00
The present enlargement (estimated,)	40,000 00
Grading, fencing, improvements of different kinds for fifty-two years	125,017 00
	709,317 00

THE GRAVE OF WILLIAM PENN.

I have just read Col. Forney's letter in which he tells of the adventures of a party of Pennsylvanians in search of the grave of our great founder. It is not creditable to the intelligence of the English agriculturists living in sight of the once famous graveyard that contains the remains of our great founder, and more especially of an Englishman so renowned in his generation that their own Government has for nearly a century been paying his descendants an annuity of four thousand pounds sterling annually, that they should be unable to point out his last resting place. My younger readers may perhaps be benefited by a brief sketch of our great founder.

His father, Admiral Penn, was one of the most famous of old England's naval heroes. To liquidate a debt of £16,000 due the Admiral for services and advances to his country, the English monarch, Charles II, granted in 1681 to his son the charter for 28,000,000 of acres, constituting the State of Pennsylvania.

William Penn had adopted the religious principles of the Quakers, and primarily sought a home for his persecuted brethren. Such a grant was an easy mode for an English monarch, like Charles, to pay an old debt to a renowned naval hero, and the motive for seeking and accepting it on part of William Penn was worthy of the highest commendation. But the transaction itself was, in its very essence, inconsistent with every principle of English liberty, even as understood two hundred years ago. Nothing but the unprecedented moderation and wisdom of William Penn ever kept it from being an untold calamity to our good old Commonwealth. Ninety-nine hundredths of the enormous powers vested in him by this feudal charter were in his frame of government, and by his Colonial Constitution renounced and recognized by him as belonging to the people as their inherent rights; and even the remnant not abandoned only kept him and his children after him in an almost constant contest with the representatives of the people, until the revolution of 1776 ended the whole.

William Penn, as the founder of Pennsylvania, certainly acted magnanimously in all his transactions with the colonists, and displayed an amount of far-seeing sagacity and statesmanship fully one hundred years in advance of the age in which he lived. History has chiefly noticed him as a religious reformer, in an age fruitful of such, many of whom were more successful in that respect than himself. I maintain that his greatest achievement was in the founding of civil institutions for his infant colony, so wise, so liberal, so far in advance of the age in which he lived that after nearly two hundred years we find so little to reject.

He was human, and of course he erred. Whenever he referred to his charter and the enormous feudal rights which it conveyed he was led astray; but when distrusting all these he turned to his Bible, (in which he alone was deeply learned,) his almost unerring instincts brought him to the conclusions embodied in his frame of government and Constitution. And yet this useful life was sadly clouded at its close. Few of the cherished aspirations of his manhood were realized. To the great misfortune of himself and his colony his cherished purpose of making Pennsylvania his permanent home was never accomplished. Its legislative Assembly, three-fourths of the time, acted in opposition to his wishes. His revenues from his colony came in slowly; his expenditures at home were heavy; his English steward proved false; his creditors became impatient, and he was confined for months in a debtor's apartment. The generosity of his friends secured his discharge, only to find that these accumulated misfortunes had brought on an attack of apoplexy, from which he never recovered. For seven years he lived lost to the world, and only deriving enjoyment from religious exercises. And now it seems that his final resting place can only be found after hours of diligent search. Col. Forney thus records his attempts:

"And yet there was not a trace in all this splendor of William Penn! His name had been confounded with his Church of England kindred; but I saw that he was regarded as the founder of the chief mansion, and even as the man who had erected the monument to Gray! At length I ventured to ask: "Can you tell me of a place called Jordans?" Nobody knew. Finally Mr. Simpson, the intelligent manager of the estate, thought we could find it by driving over to Beaconsfield, about eight miles off, and so directed, we drove through the odorous lanes of beeches to the village famous as the country residence of Mr. Disraeli, the present Prime Minister of England, originally his late wife's property, and now his own. It seems quite extensive, and the house is evidently one of the oldest and best. But what a sleepy village! Broad, clean streets, yet no signs of thrift or work; all dull and cheerless. Here we stopped to have our horse shod; but nobody could tell us about "Jordans;" nobody had heard of William Penn; even the driver, after going a mile further, confessed that he had no clue to it. Could we have passed it? "What is that?" I said to Colonel Muter, pointing to a small field or lot, with a few tombstones shining white through the beeches. "That is evidently a family graveyard," said my friend, leaping out to prove it, and running down a narrow lane to the gate, he exclaimed: "Here it is!" We followed to find "Jordans," and a more secluded and desolate spot you could not conceive. The brick Quaker meeting-house was shut, and as we looked in through the dirty windows we found a dreary silence, hardly relieved by vacant benches. The old woman who lived in the front rooms was out, and there was nobody to talk to us but the few white headstones in the adjacent lot; and this is what they said:

First Row.—Five stones over five graves: On the first was "William Penn, 1718, and Hannah Penn, 1726;" on the second, "Gulielma Maria Penn, 1689; on the third, "Mary Pennington, 1682;" on the fourth, "Isaac Pennington, 1679;" on the fifth, "Isaac Rule, 1765," and directly across the path, opposite to "William Penn and Hannah Penn," was a stone marked "Five Children of William Penn," placed at the head of the first of five small graves. On the row behind William Penn and his first and second wives, Hannah and Guli, were five other headstones, marked successively: "Letitia Penn," (no date;) "Springett Penn, 1690;" "Mary Frame," (no date;) "John Pennington, 1710;" "Mary Elwood, 1708;" "Thomas, 1713;" "William Masterman, 1848, Lydia Masterman." It was evident that these stones had been put there recently, and that the graves had all been raised. From the local history I extract the following note, which partially sustains this view. The place is far from being as picturesque as the writer paints it; indeed it would be altogether depressing but for its grove of beautiful beeches:

"The hamlet of Jordans, noted as the burial places of William Penn and several of the earlier members of the Society of Friends, forms a triangle with the two villages of Chalfont St. Giles and Chalfont St. Peter, and is distant about two miles from each. Here, in a spot remarkable for the beauty of its situation, is a little meeting-house belonging to the Society of Friends, surrounded by a verdant graveyard. In 1671 the land was purchased and appropriated for a burial ground, and the meeting-house appears to have been built in 1687–8, for, according to a deed belonging to the estate, the land and meeting-house were conveyed to certain trustees in 1688, when it was described as the new built house and tenements called "New Jordans." From another deed we learn that in 1748 there was a little more land added to the upper end of the grave land, given by Samuel Vandervaal for a burial place for himself and family. This remains to the present day separated from the rest of the ground. The monthly meetings of the Society were held at Hunger Hill from 1670 to 1727, that house during the greater portion of the time being in the occupation of Thomas Elwood."

Jordans Friends' Meeting-house is a plain brick building, with a tiled roof and latticed windows. In the interior it is panelled with oak. There is a good sized cottage adjoining it, the principal chamber of which was evidently used in former times as a gallery in times of over-crowded meetings, as it communicates with the meeting-house by means of shutters. Attached to the back is a stable for twenty horses. The situation is peculiarly picturesque, and sequestered in a dell surrounded by beech woods.

The burial-ground is nearly full, but only a few of the graves can be identified. These are tenanted by William Penn, and five of his children, who died young, Isaac, Mary, and John Pennington, Thomas and Mary Ellwood, Mary Frame and Joseph Rule. In the piece of ground above alluded to there is a vault wherein Samuel Vandervaal and his wife are interred. There is no notice to be found as to when the meetings for worship were discontinued at Jordans, but the last time the place was mentioned as sending representatives to the Monthly Meetings is in 1787 ; so in all probability it was at that date. The author of the " Shrines of Bucks," writing of his visit to the grave of Penn, says ; " Entering the grave-yard we found a spot where a number of little mounds marked the resting-places of Penn and his family. Here no monumental marble, or even a simple headstone, marks the spot where the founder of Pennsylvania found at last that rest and freedom from the persecution he had experienced in his life-time. The fifth mound from the doorway of the little chapel was the one beneath which, and between his two wives, he was lowly laid. Jordans has not been inaptly styled the ' Westminster Abbey of the Friends.' "

As we walked among these solitary mounds, I noticed two men in an adjoining orchard picking apples. "Do you know anything about this place? "No, except that it is a Quaker grave-yard, and that the Quakers hold meetings in the brick building twice a year."

I never supposed that my experience would be so full of interest ; nor, indeed, that the grave of William Penn would be found in a spot so obscure, or that his name would be forgotten in the very neighborhood where he lived and died. I am not without hope that the friends of Philadelphia will take steps to remove the remains of their greatest leader, to the State that bears his name, and to the city that he founded in 1682. There is no place in the world so fitting as Fairmount Park, and no time more appropriate for the ceremony than the Centennial year. In any case, what I have written may quicken discussion and inquiry. The whole story of William Penn is the romance of truth, and there is not a region in the globe in which it is so well illustrated, as in the forty miles around Philadelphia, including part of New Jersey and Delaware.

THE NEW GEOLOGICAL SURVEY OF PENNSYLVANIA.

The last Legislature, by act of 14th of May, 1874, authorized the appointment of commissioners to organize and superintend a geological survey of Pennsylvania. This commission consists of the Governor, *ex officio* president ; James M'Farlane, Bradford county ; Daniel J. Morrell, Johnstown ;

Henry W. Oliver, Pittsburg; Samuel Q. Brown, Venango; Henry M'Cormick, Harrisburg; Henry S. Eckert, Reading; Ario Pardee, Carbon; Robert B. Wilson, Clearfield; William A. Ingham and J. P. Pearse, Philadelphia J. P. Lesley, an assistant of Rogers in the former survey, was appointed chief geologist. Some of the members of this Commission have requested me to prepare a sketch of the doing of the former survey for my report.

Pennsylvania, although her mineral wealth is nearly equal to that of all the other States, was not the first to organize a geological survey. Massachusetts lead off by her report published about 1841 in two large volumes, and followed shortly thereafter with three other volumes upon the reptiles, fishes, birds, quadrupeds, &c., &c., of that State. New York followed with her exhaustive survey, including, in all, nineteen volumes published from 1841 to 1852. These included, geology, four volumes; zoology, five volumes; palentology, two volumes; botany, two volumes; mineralogy, one volume; and agriculture, five volumes. That State has also erected a large building designed to preserve the specimens collected by her survey and any others that subsequently may be procured from any section, thus to illustrate fully all departments of physical science. Our own Legislature followed the example set her by Massachusetts and New York, and by act of 29th March, 1836, authorized a geological survey of our State. The magnitude of the undertaking was not realized, as that act only contemplated the labor of one chief and two assistant geologists and a chemist. The appropriation was only $6,400 a year for five years. Some additional aid was given, and the expenditure for field exploration was as follows:

First field exploration and salaries incurred in preparing materials for report—1836, $2,700 00; 1837, $6,500 00; 1838, $12,000 00; 1839, $15,991 27; 1840, $17,800 00; 1841, $12,674 93; 1842, $5,541 67; 1843, $1,250 00. Total, $74,457 87

The consequences of the panic of 1837 were severely felt in our State, resulting in 1841–2–3 in a failure to pay the semi-annual interest upon our public debt. The result was that appropriations, unless indispensably necessary, were cut off. No appropriation for continuing this geological survey was made for some years, and the material on hand remained unpublished.

It was not until at my own motion as a member of the House at the session of 1851, a joint committee of both Houses was appointed to examine and report upon this matter. That report was a very elaborate one, covering fourteen pages of the Journal of the House of Representatives. (See vol. 2, page 131 to 144 inclusive.) The committee also reported a bill, which finally passed. (See act 14th April, 1851.) This act contemplated a further revision of the work done and the preparation of the final report by Prof. Rogers, and to carry out the same appropriated thirty-two thousand dollars in four annual payments.

A contract was made with a Philadelphia publishing house unfortunately embarrassed at the time, resulting shortly thereafter in insolvency. The contract was probably an unfortunate one for the house, certainly the Commonwealth lost four thousand dollars paid on account.

The final arrangements for the publication were not made until by the authority of the act of May 3, 1855. In the meantime Prof. Rogers had been appointed professor of geology in the University of Edinburg, Scotland. He represented that his supervision of the work was indispensable and that the work could be more cheaply printed in Europe than in this country. The Legislature therefore permitted him, on giving security, to have the entire control of its publication. He, in turn, furnished one thousand copies to the Legislature for circulation. The appropriation made by the act of 1855, in connection with the former one of 1851, amounted to $42,750, as follows: 1852, $8,000; 1853, $8,000; 1854, $7,750; 1855, $19,000; total, $42,750. The entire cost to the Commonwealth was therefore $117,207 87; of this, however, $4,000 was lost by the failure of the Philadelphia publishing house, and the actual expenditure for the survey was $113,207 87. The work is in two very large volumes, the printed matter filling 1631 pages, and a third volume of maps, sections, &c. The whole publication was done under the immediate supervision of Professor Rogers, and the mechanical execution is creditable to the publishers. I believe some two or three hundred copies of this edition (the property of the widow of Professor Rogers) are still on hand and can be procured from her agents, J. B. Lippincott & Co., Philadelphia. The survey was ably conducted. The volumes, as published, are much better adapted to the comprehension of the scientific than of the popular reader. This is a difficulty, however, which few authors have overcome, to meet the expectations of the scientific and to be equally comprehensible by the mass not familiar with technical terms.

POPULATION OF OUR WORLD.

The following abstracts are chiefly taken from "Population of the Earth," by Behm and Wagner Gotha, 1874. These latest and most carefully collected returns show that the aggregate of mankind is nearly three hundred millions in excess of what has usually been accredited to our earth's surface. We have therefore inserted these latest returns of the number of the human race for future reference and comparison with our own census.

	Area.	Population.	To sq. mile.
Europe	3,790,000	301,614,200	80
Asia	16,668,900	794,004,800	48
Africa	11,630,400	192,520,200	18
Oceanica	3,424,200	4,365,300	1
America	15,879,400	84,640,700	6
Total	51,392,900	1,377,145,200	27

The details for the Continent of Europe and the islands adjacent to it, with the year in which the census was taken, are given in the following statement:—

	Census.	Area.	Population.	To sq. mile.
Germany	1871	208,556	41,058,139	197
Austro-Hungary	1869	240,276	35,904,435	149
Lichtenstein	1867	62	8,320	134
Switzerland	1870	15,987	2,669,147	147
Denmark	1870	14,749	1,784,741	121
Iceland and Faroe	1870	40,234	79,755	2
Sweden	1870	170,541	4,168,525	24
Norway	1870	122,243	1,753,000	14
Netherlands	1870	12,676	3,688,377	291
Luxemburg	1871	998	197,504	20
Belgium	1869	11,370	5,021,336	442
Great Britain and Ireland	1871	121,078	31,817,108	263
British dependencies	1871	145	160,369	1,037
France	1872	204,031	36,102,621	177
Spain	1867	192,908	16,377,844	85
Canary Islands	1867	2,807	276,036	98
Portugal	1868	34,491	3,995,153	116
Azores and Madeira	1868	1,311	365,821	279
Andarra	1868	149	12,000	80
Italy	1871	114,261	26,796,253	234
Turkey	1871	133,955	10,510,000	78
Roumania	1871	46,696	4,500,000	96
Servia	1871	16,812	1,319,283	78
Montenegro	1871	1,700	100,000	50
Russia	1867	1,923,820	69,364,541	36
Finland	1867	138,788	1,843,253	13
Greece	1870	19,347	1,457,894	70
Total		3,790,011	301,614,227	80

The British dependencies included in the above statement are those within the limits of Europe only—the Islands of Heligoland and Malta, and Gibralter.

The following gives the areas and population of the leading Asiatic nations :—

	Census.	Area.	Population.	To sq. mile.
Russia	1867	5,942,806	10,537,513	2
Turkey	1871	672,315	16,463,000	24
Arabia	....	1,025,732	4,000,000	4
Persia	....	635,769	5,000,000	8
China	....	3,740,726	446,500,000	119
Japan	1870	149,354	34,785,321	233
Hindostan and British Burmah	1869	1,558,280	206,225,580	132
East India Islands	....	799,118	32,620,000	41

The principal islands of the Pacific Ocean are given in the following :—

	Area.	Population.	To sq. mile.
Australia	2,944,341	1,565,294	0.5
Tasmania	26,207	99,328	4.0
New Zealand	106,227	294,028	3.0
New Guinea	274,435	1,000,000	4.0
Sandwich Islands	7,630	62,959	8.0

There are so few well defined geographical divisions in Africa, that the following embrace all of interest; the population of Algeria being according to French census of 1872, and that of the other countries named being estimated :—

	Area.	Population.	To sq-mile.
Morocco	259,508	2,750,000	11
Algeria	258,234	2,921,146	11
Tunis	45,702	2,000,000	44
Tripoli, etc.	344,312	750,000	2
Egypt	658,902	8,000,000	12
Cape Colony	220,451	682,600	3
Madagascar	227,685	5,000,000	22

The figures for the different divisions of North America and the neighboring islands, are as follows, the population of the United States being given according to the census of 1870, and that of Mexico according to the census of 1871 :—

	Area.	Population.	To sq-mile.
Greenland	759,585	10,000	....
British America	3,523,092	3,888,577	1
United states	3,603,884	38,925,598	11
Mexico	761,442	9,176,082	12
Gautemala	40,766	1,180,000	29
San Salvador	7,323	600,000	82
Nicaragua	58,153	350,000	6
Costa Rica	21,488	165,000	8
Honduras	46,078	350,000	8
British Honduras	13,496	25,635	2
Carried forward	8,835,307	54,670,872	159

	Area.	Population.	To sq-mile.
Brought forward	8,835,307	54,670,872	159
Bermudas	24	11,796	491
St. Pierre and Miquelon Hayti	81	3,971	49
Hayti	10,202	572,000	57
San Domingo	17,822	136,500	8
Spanish Islands	49,465	2,068,870	42
British Islands	12,632	1,054,116	83
French Islands	1,016	306,244	301
Dutch Islands	368	35,482	96
Danish Islands	118	37,821	321
Swedish Islands	8	2,898	362
Total	8,927,043	58,900,570	7

The countries of South America make the following showing ; the population of the Argentine Republic being given according to the census of 1869 :

	Area.	Population.	To sq. mile.
Brazil	3,252,050	10,000,000	3
French Guiana	30,068	25,151	1
Dutch.....do.	59,780	59,885	1
British....do.	99,897	152,932	2
Venezuela	368,128	1,500,000	4
Colombia	357,050	3,000,000	....
Ecuador	221,815	1,300,000	6
Peru	510,292	2,500,000	5
Bolivia	535,708	2,000,000	4
Chili	132,575	2,000,000	15
Argentine Republic	871,588	1,877,490	2
Paraguay	63,770	1,000,000	16
Uraguay	66,700	300,000	5
Patagonia and Terra del Fuego	376,350	24,000	....
Islands	6,525	686	....
Total	6,952,356	25,740,140	4

Another statement of interest, in this connection, shows the area and population of the foreign possessions of the different European powers, which are as follows :—

	Area.	Population.		Area.	Population.
Great Britain	7,924,148	171,610,000	Portugal	739,703	3,873,000
Turkey	1,721,232	27,213,000	Denmark	87,094	127,000
Holland	674,873	23,433,000	Sweden	8	2,900
Russia	5,942,806	10,730,000			
Spain	117,138	6,419,000			
France,	457,515	6,240,000	Total	17,664,521	249,647,900

It is thus seen that the possessions of nine European powers outside of Europe. embrace nearly five times as large an area as the whole of Europe, while the population of this enormous territory is barely equal to five-sixths of that of Europe. The foreign dependencies of all the European States, included in the last statement, exceed the ruling power in territory, except Spain and Sweden : but Great Britain, Turkey and Holland, are the only European States whose dependencies have a greater population than themselves.

TABLE *showing the population of the United States by States and Territories.*

STATES.	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1860.	1870.
Alabama				127, 901	309, 527	590, 756	771, 623	964, 201	996, 992
Arkansas				14, 255	30, 888	97, 574	209, 897	435, 450	484, 471
California							92, 597	379, 994	560, 247
Connecticut	237, 946	251, 002	261, 942	275, 148	297, 675	309, 978	370, 792	460, 147	537, 454
Delaware	59, 096	64, 273	72, 674	72, 749	76, 748	78, 085	91, 532	112, 216	125, 015
Florida					34, 730	54, 477	87, 445	140, 424	187, 748
Georgia	82, 548	162, 686	252, 433	340, 985	516, 823	691, 392	906, 185	1, 057, 286	1, 184, 109
Illinois			12, 282	55, 162	157, 445	476, 183	851, 470	1, 711, 951	2, 530, 891
Indiana		5, 641	24, 520	147, 178	343, 031	685, 866	988, 416	1, 350, 428	1, 680, 637
Iowa						43, 112	192, 214	674, 913	1, 194, 020
Kansas								107, 206	364, 399
Kentucky	73, 677	220, 955	406, 511	564, 135	687, 917	779, 828	982, 405	1, 155, 684	1, 321, 011
Louisiana			76, 566	152, 933	215, 739	352, 411	517, 762	708, 002	726, 915
Maine	96, 540	151, 719	228, 705	298, 269	399, 455	501, 793	583, 169	628, 279	626, 915
Maryland	319, 728	341, 548	380, 546	407, 350	447, 040	470, 019	583, 034	687, 049	780, 894
Massachusetts	378, 787	422, 845	472, 040	523, 159	610, 408	737, 699	994, 514	1, 231, 066	1, 457, 351
Michigan			4, 762	8, 765	31, 639	212, 267	397, 654	749, 113	1, 184, 059
Minnesota							6, 077	172, 023	439, 706
Mississippi		8, 850	40, 352	75, 448	136, 621	375, 651	606, 526	791, 305	827, 922
Missouri			20, 845	66, 557	140, 455	383, 702	682, 044	1, 182, 012	1, 721, 295
Nebraska								28, 841	122, 933
Nevada								6, 857	42, 491
New Hampshire	141, 885	183, 858	214, 460	244, 022	269, 328	284, 574	317, 976	326, 073	318, 300
New Jersey	184, 139	211, 149	245, 562	277, 426	320, 823	373, 306	489, 555	672, 035	906, 096
New York	340, 120	589, 051	959, 049	1, 372, 111	1, 918, 608	2, 428, 921	3, 097, 394	3, 880, 735	4, 382, 759
North Carolina	393, 751	478, 103	555, 500	638, 829	737, 987	753, 419	869, 039	992, 622	1, 071, 361
Ohio		45, 365	230, 760	581, 295	937, 903	1, 519, 467	1, 980, 329	2, 339, 511	2, 665, 260
Oregon							13, 294	52, 465	90, 923
Pennsylvania	434, 373	602, 365	810, 091	1, 047, 507	1, 348, 233	1, 724, 033	2, 311, 786	2, 906, 215	3, 521, 951
Rhode Island	68, 825	69, 122	76, 931	83, 015	97, 199	108, 830	147, 545	174, 620	217, 353
South Carolina	249, 073	345, 591	415, 115	502, 741	581, 185	594, 398	668, 507	703, 708	705, 606
Tennessee	35, 691	105, 602	261, 727	422, 771	681, 904	829, 210	1, 002, 717	1, 109, 801	1, 258, 520
Texas							212, 592	604, 215	818, 579
Vermont	85, 425	154, 465	217, 895	235, 966	280, 652	291, 948	314, 120	315, 098	330, 551
Virginia	747, 610	880, 200	974, 600	1, 065, 116	1, 211, 405	1, 239, 797	1, 421, 661	1, 596, 318	1, 255, 163

TABLE SHOWING POPULATION—*Continued.*

STATES.	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1860.	1870.
West Virginia									442, 014
Wisconsin						30, 945	305, 391	775, 881	1, 054, 670
Total	3, 929, 214	5, 308, 483	7, 239, 881	9, 633, 822	12, 866, 020	17, 069, 453	23, 191, 876	31, 443, 321	38, 558, 371
TERRITORIES.									
Arizona									9, 658
Colorado								34, 277	39, 864
Dakota								4, 837	14, 181
District of Columbia		14, 093	24, 023	33, 039	39, 834	43, 712	51, 687	75, 080	131, 700
Idaho									14, 999
Montana									20, 595
New Mexico							61, 547	93, 516	91, 874
Utah							11, 380	40, 273	86, 786
Washington								11, 594	23, 955
Wyoming									9, 118
Total		14, 093	24, 023	33, 039	39, 834	43, 712	124, 614	259, 577	442, 730

POPULATION OF PENNSYLVANIA BY COUNTIES—1790 TO 1870.

COUNTIES.	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1860.	1870.
Adams		13,172	15,152	19,370	21,379	23,044	25,981	28,006	30,315
Allegheny	10,309	15,087	25,317	34,921	50,552	81,235	138,290	178,831	262,204
Armstrong		2,399	6,143	10,324	17,701	28,365	29,560	35,797	43,382
Beaver		5,776	12,168	15,340	24,183	29,368	26,689	29,140	36,148
Bedford	13,124	12,039	15,746	20,248	24,502	29,335	23,052	26,736	29,635
Berks	30,179	32,407	43,146	46,275	53,152	64,569	77,129	93,818	106,701
Blair							21,777	27,829	38,051
Bradford				11,554	19,746	32,769	42,831	48,734	53,204
Butler		3,916	7,346	10,193	14,581	22,378	30,346	35,594	36,510
Bucks	25,401	27,496	32,371	37,842	45,745	48,107	56,091	63,578	64,336
Cambria			2,117	3,287	7,076	11,256	17,773	29,155	36,569
Cameron									4,273
Carbon							15,686	21,033	28,144
Centre	7,562	13,609	10,681	13,796	18,879	20,492	23,355	27,000	34,418
Chester	27,937	32,093	39,596	44,451	50,910	57,515	66,438	74,578	77,805
Clarion							23,565	24,988	26,537
Clearfield			875	2,342	4,803	7,834	12,586	18,759	25,741
Clinton						8,323	11,207	17,723	23,211
Columbia				17,621	20,059	24,267	17,710	25,065	28,766
Crawford		2,346	6,178	9,397	16,030	31,724	37,849	48,755	63,832
Cumberland	18,243	25,386	26,757	23,606	29,226	30,953	34,327	40,098	43,912
Dauphin	18,177	22,270	31,883	21,653	25,243	30,118	35,754	46,756	60,740
Delaware	9,483	12,809	14,734	14,810	17,323	19,791	24,679	30,597	39,403
Elk							3,531	5,915	8,488
Erie		1,468	3,758	8,541	17,041	31,344	38,742	49,432	65,973
Fayette	13,325	20,159	24,714	27,285	29,172	33,574	39,112	39,909	43,284
Franklin	15,655	19,638	23,083	31,892	35,037	37,793	39,904	42,126	45,365
Fulton							7,567	9,131	9,360
Forest								898	4,010
Greene		8,605	12,544	15,554	18,028	19,147	22,136	24,343	25,887
Huntingdon	7,565	13,008	14,778	20,139	27,145	35,484	24,786	28,100	31,251
Indiana			6,214	8,882	14,252	20,782	27,170	33,687	36,138
Jefferson			161	561	2,025	7,253	13,518	18,270	21,656
Juniata						11,080	13,029	16,986	17,390
Lancaster	36,147	43,403	53,927	67,975	76,631	84,203	98,944	116,314	121,340
Lawrence							21,079	22,999	27,298
Lebanon				16,975	20,557	21,872	26,071	31,831	34,096

POPULATION OF PENNSYLVANIA—CONTINUED.

COUNTIES.	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1860.	1870.
Lehigh				18,895	22,256	25,787	32,479	43,753	56,796
Luzerne	4,904	12,839	18,109	20,027	27,379	44,006	56,072	90,244	160,915
Lycoming		5,414	11,006	13,517	17,636	22,649	26,257	37,399	47,626
M'Kean			142	728	1,439	2,975	5,254	8,859	8,825
Mercer		3,228	8,277	11,681	19,729	32,873	33,172	36,856	49,977
Mifflin			12,132	16,618	21,690	13,092	14,980	16,340	17,508
Monroe						9,879	13,270	16,758	18,362
Montgomery	22,929	24,150	29,703	35,793	39,406	47,241	58,291	70,500	81,612
Montour							13,239	13,053	15,344
Northampton	24,250	30,062	38,145	31,765	39,482	40,996	40,235	47,904	61,432
Northumberland	17,161	27,797	36,327	15,424	18,133	20,027	23,272	28,922	41,444
Perry				11,284	14,261	17,096	20,088	22,793	25,447
Philadelphia	54,391	81,009	111,210	135,637	188,797	258,037	408,762	565,529	674,022
Pike				2,890	4,843	3,832	5,881	7,155	8,436
Potter			29	186	1,265	3,371	6,048	11,470	11,265
Schuylkill				11,311	20,744	29,053	60,713	89,510	116,428
Somerset		10,188	11,284	13,974	17,762	19,650	24,416	26,778	28,226
Snyder								15,035	15,606
Sullivan							3,694	5,637	6,191
Susquehanna				9,960	16,787	21,195	28,688	36,267	37,523
Tioga			1,687	4,021	8,978	15,498	23,987	31,044	35,097
Union				18,619	20,795	22,787	26,083	14,145	15,565
Venango		1,130	3,060	4,915	9,470	17,900	18,310	25,043	47,925
Warren		233	827	1,976	4,697	9,278	13,671	19,190	23,897
Washington	23,866	28,298	36,289	40,038	42,784	41,279	44,939	46,805	48,483
Wayne		2,562	4,125	4,127	7,663	11,848	21,890	32,239	33,188
Westmoreland	16,018	22,726	26,392	30,540	38,400	42,699	51,726	53,736	58,719
Wyoming							10,655	12,540	14,585
York	37,747	25 643	31,958	38,747	42,859	47,010	57,450	68,200	76,134
Totals	434,373	602,365	810,091	1,047,507	1,348,233	1,724,033	2,311,786	2,906,215	3,521,951

POPULATION *of the principal cities and towns of the State.*

	1850.	1860.	1870.	Per cent. of increase, 1860 to 1870.
Philadelphia	408,762	565,529	674,022	19.19
Pittsburg	46,601	49,217	(*a*) 121,977	147.83
Allegheny	21,262	28,702	(*b*) 58,596	104.14
Scranton		9,223	35,092	280.50
Reading	15,743	23,162	33,930	46.48
Harrisburg	7,834	13,405	23,104	72.35
Lancaster	12,369	17,603	20,233	14.94
Erie	5,858	9,419	19,646	108.57
Wilkesbarre	2,723	4,253	(*c*) 17,264	305.92
Williamsport	1,615	5,664	16,030	183.01
Allentown	3,779	8,025	13,884	72.95
Pottsville	7,515	9,444	12,384	31.13
York	6,863	8,605	11,003	27.86
Easton	7,250	8,944	10,987	22.84
Norristown	6,024	8,848	10,753	21.52
Altoona		3,591	10,610	195.46
Chester	1,667	4,631	9,485	104.81
Titusville	243	438	8,639	1872.30
Danville	3,302	6,385	8,436	32.12
Meadville	2,578	3,702	7,103	91.86
Lock Haven	830	3,349	6,986	108.59
Corry			6,809	
Pittston		3,682	6,760	83.59
Lebanon	2,184	4,449	6,727	51.22
Carlisle	4,581	5,664	6,650	17.40
Columbia	4,140	5,007	6,461	39.03
Carbondale	4,945	5,575	6,393	14.67
Chambersburg	3,335	5,255	6,308	20.03
New Castle	1,614	1,882	6,164	227.52
Johnstown	1,269	4,185	6,028	44.03
West Chester	3,172	4,757	5,630	18.37
Phœnixville	2,670	4,886	5,292	8.30

(*a*) Since the census of 1870, fourteen wards have been added to Pittsburg, with a population of 35,723, without which the population would be 86,076, and percentage of increase 74.89.

(*b*) Two wards, with a population of 5,416, added since census of 1870, population without, 53,180 and percentage of increase 85.28.

(*c*) Wilkesbarre incorporated into a city and the township of Wilkesbarre added, with a population of 7,090 since census of 1870, without which, population would be 10,174, and percentage of increase 139.21.

DISTRIBUTION OF POPULATION.

TABLE *of Areas, Families and Dwellings, with the distribution of population to each, in the United States and the State of Pennsylvania, at the censuses of* 1870, 1860 *and* 1850.

	AREAS.				FAMILIES.						DWELLINGS.					
	1870.		1860.	1850.	1870.		1860.		1850.		1870.		1860.		1850.	
	Square miles..........	Persons to a square mile......	Persons to a square mile......	Persons to a square mile......	Number......	Persons to a family....	Number...............	Persons to a family....	Number..........	Persons to a family....	Number...............	Persons to a dwelling,	Number...............	Persons to a dwelling,	Number...............	Persons to a dwelling.
The United States...............	3,603,884	10.70	10.39	7.78	7,579,363	5.09	5,210,934	5.28	3,598,240	5.56	7,042,833	5.47	4,696,692	5.53	3,362,337	5.94
State of Pennsylvania	46,000	76.56	63.18	50.26	675,408	5.21	524,558	5.54	408,497	5.66	635,680	5.54	515,319	5.64	386,216	5.99

WHICH IS TO BE THE EMPIRE STATE?

The annexed official tables show the movements of population in New York and Pennsylvania for eighty years. During the first forty years New York was constantly gaining in the race, but during the last forty years our State has, at each decennial census, been closing up the gap. The same rate of progress will, at the closing of the present century, leave them side by side. But the elements of increase are decidedly in favor of Pennsylvania. Her great gain is in her mining and manufacturing districts. New York has no elements to compete with these. Pennsylvania must, each decennial census, gain upon the ratio of the last ten years, and the close of the nineteenth century will show her not only the Keystone of the Federal arch, but also the Empire State of the Union.

New York State population from 1790 to 1870, actual rate of increase; also estimated increase from 1870 to 1900, at per cent. of increase of 1870 :

CENSUS OF NEW YORK.	Population.	Increase.	Per ct. of incr.
1790	340,120		
1800	589,051	248,931	73.
1810	959,049	369,998	38.
1820	1,372,111	413,062	43.
1830	1,918,608	546,497	39.75
1840	2,428,921	510,313	26.50
1850	3,097,394	668,473	27.50
1860	3,880,735	783,341	25.
1870	4,382,759	502,024	12.93
1880	4,949,449	566,690	12.93
1890	5,589,012	639,563	12.93
1900	6,311,671	722,659	12.93

Pennsylvania State population from 1790 to 1870, &c. :—

CENSUS OF PENNSYLVANIA.	Population.	Increase.	Per ct. of incr.
1790	434,373		
1800	602,365	167,992	38.70
1810	810,091	207,726	34.48
1820	1,047,507	237,416	29.43
1830	1,348,233	300,726	28.70
1840	1,724,033	375,800	27.87
1850	2,311,786	587,753	34.
1860	2,906,215	594,429	25.71
1870	3,521,951	615,736	21.19
1880	4,268,252	746,301	21.19
1890	5,172,694	904,442	21.19
1900	6,268,787	1,096,093	21.19

Pennsylvania wanting only an addition of 42,884 in the year 1900, to equal the population of New York State.

ORGANIZATION OF COUNTIES.

Names and date, day, month and year, of the erection of the several counties of the Commonwealth of Pennsylvania, and the territory from which they were formed; the three first counties which were formed, to wit:—Philadelphia, Bucks and Chester, were established at the first settlement of the Province of Pennsylvania, and formed the only original counties of all that territory of which the now great State is formed, comprised of sixty-six counties, as follows, viz:

1. Adams, January 22, 1800, formed of a part of York.
2. Allegheny, September 24, 1788, formed of a part of Westmoreland and Washington.
3. Armstrong, March 12, 1800, formed of a part of Allegheny, Westmoreland and Lycoming.
4. Beaver, March 12, 1800, formed of a part of Allegheny and Washington.
5. Bedford, March 9, 1771, formed of a part of Cumberland.
6. Berks, March 11, 1752, formed of a part of Philadelphia, Chester and Lancaster.
7. Blair, February 26, 1846, formed of a part of Huntingdon and Bedford.
8. Bradford, February 21, 1810, formed of a part of Luzerne and Lycoming.*
9. Bucks, one of the original counties of the Province.†
10. Butler, March 12, 1800, formed of a part of Allegheny.
11. Cambria, March 20, 1804, formed of a part of Huntingdon, Somerset and Bedford.
12. Cameron, March 29, 1860, formed of a part of Clinton, Elk, M'Kean and Potter.
13. Carbon, March 13, 1843, formed of a part of Northampton and Monroe.
14. Centre, February 13, 1800, formed of a part of Mifflin, Northumberland, Lycoming and Huntingdon.
15. Chester, one of the original counties established at the first settlement of the Province.
16. Clarion, March 11, 1839, formed of a part of Venango and Armstrong.
17. Clearfield, March 26, 1804, formed of a part of Lycoming and Northumberland.

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*Previous to March 24, 1812, this county was called Ontario, but its name was changed to Bradford on that day.

†Bucks county was one of the three original counties established at the first settlement of the Province of Pennsylvania; the other two being Philadelphia and Chester.—*See Votes of the Assembly, Vol.* 1.

18. Clinton, June 21, 1839, formed of a part of Lycoming and Centre.
19. Columbia, March 22, 1813, formed of a part of Northumberland.
20. Crawford, March 12, 1800, formed of a part of Allegheny.
21. Cumberland, January 27, 1750, formed of a part of Lancaster.
22. Dauphin, March 4, 1785, formed of a part of Lancaster.
23. Delaware, September 26, 1789, formed of a part of Chester.
24. Elk, April 18, 1843, formed of a part of Jefferson, Clearfield and M'Kean.
25. Erie, March 12, 1800, formed of a part of Allegheny.
26. Fayette, September 26, 1783, formed of a part of Westmoreland.
27. Forest, April 11, 1848, formed from a part of Jefferson and Venango.*
28. Franklin, September 9, 1784, formed from a part of Cumberland.
29. Fulton, April 19, 1850, formed from a part of Bedford.
30. Greene, February 9, 1796, formed from a part of Washington.
31. Huntingdon, September 20, 1787, formed from a part of Bedford.
32. Indiana, March 30, 1803, formed from a part of Westmoreland and Lycoming.
33. Jefferson, March 26, 1804, formed from a part of Lycoming.
34. Juniata, March 2, 1831, formed from a part of Mifflin.
35. Lancaster, May, 10, 1729, formed from a part of Chester.
36. Lawrence, March 25, 1850, formed from a part of Beaver and Mercer.
37. Lebanon, February 16, 1813, formed from a part of Dauphin and Lancaster
38. Lehigh, March 6, 1812, formed from a part of Northampton.
39. Luzerne, September 25, 1786, formed from a part of Northumberland.
40. Lycoming, April 13, 1796, formed from a part of Northumberland.
41. M'Kean, March 20, 1804, formed from a part of Lycoming.
42. Mercer, March 12, 1800, formed from a part of Allegheny.
43. Mifflin, September 19, 1789, formed from a part of Cumberland and Northumberland.
44 Monroe, April 1, 1836, formed from a part of Northampton and Pike.
45. Mongomery, September 10, 1784, formed from a part of Philadelphia.
46. Montour, May 3, 1850, formed from a part of Columbia.
47. Northampton, March 11, 1752, formed from a part of Bucks.
48. Northumberland, March 27, 1772, formed from parts of Lancaster, Cumberland, Berks, Bedford and Northampton.
49. Perry, March 22, 1820, formed from a part of Cumberland.
50. Philadelphia, one of the three original counties established at the first settlement of the Province.

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*Part of Venango added by act approved October 31, 1866.

51. Pike, March 26, 1814, formed from a part of Wayne.
52. Potter, March 26, 1804, formed from a part of Lycoming.
53. Schuylkill, March 1, 1811, formed from a part of Berks and Northampton.
54. Snyder, March 2, 1855, formed from a part of Union.
55. Somerset, April 17, 1795, formed from a part of Bedford.
56. Sullivan, March 15, 1847, formed from a part of Lycoming.
57. Susquehanna, February 21, 1810, formed from a part of Luzerne.
58. Tioga, March 26, 1804, formed from a part of Lycoming.
59. Union, March 22, 1813, formed from a part of Northumberland.
60. Venango, March 13, 1800, formed from a part of Allegheny and Lycoming.
61. Warren, March 12, 1800, formed from a part of Allegheny and Lycoming.
62. Wayne, March 21, 1798, formed from a part of Northampton.
63. Washington, March, 28, 1781, formed from a part of Westmoreland.
64. Westmoreland, February 26, 1773, formed from a part of Bedford, and in 1785 part of the purchase of 1784 was added thereto.
65. Wyoming, April 4, 1842, formed from a part of Luzerne.
66. York, August 19, 1749, formed from a part of Lancaster.

AGRICULTURE AND MANUFACTURES.

Tabular Statement—*Showing the number of persons and occupations, in Pennsylvania, at the census of* 1870.

	Percentage of each occupat'n,	PERSONS OCCUPIED—AGE AND SEX.						
		Number.	10 to 15.		15 to 60.		60 and over.	
			Male.	Female.	Male.	Female.	Male.	Female.
Agriculture	25.48	260,051	12,294	46	218,247	1,087	28,231	146
Professional and personal services	27.73	283,000	6,063	6,993	175,800	81,384	10,811	1,940
Trade and transportation	11.88	121,253	2,376	297	111,180	4,068	3,158	174
Manufactures and mining	34.91	356,240	8,614	2,304	299,529	35,404	9,906	483
Population, ten years and over	100.00	2,597,809	249,620	246,823	946,418	959,534	96,480	98,934

LAND—IMPROVED AND UNIMPROVED.

	Acres of improved land..	Acres of unimproved land..	Present value of farms....
Adams	214,516	58,509	$14,611,060
Allegheny	292,089	93,570	56,448,818
Armstrong	230,915	126,155	13,681,426
Beaver	176,861	71,974	14,198,713
Bedford	197,250	211,527	9,495,119
Berks	374,560	97,448	43,638,465
Blair	98,285	52,500	8,098,146
Bradford	366,851	226,464	25,158,245
Bucks	315,833	48,786	40,289,213
Butler	273,158	157,883	18,230,848
Cambria	93,438	136,459	4,834,076
Cameron	6,485	62,777	1,332,188
Carbon	25,782	34,620	1,484,210
Centre	152,238	90,362	13,565,198
Chester	374,759	68,154	46,737,688
Clarion	162,747	111,317	7,784,127
Clearfield	116,218	156,955	5,931,360
Clinton	54,852	72,519	4,797,040
Columbia	136,710	68,445	9,015,460
Crawford	328,555	197,685	21,905,661
Cumberland	239,784	49,758	22,474,577
Dauphin	172,586	61,249	19,053,433
Delaware	89,438	11,316	19,288,727
Elk	16,124	28,739	1,019,820
Erie	279,868	134,889	23,991,607
Fayette	235,006	145,066	18,250,958
Forest	10,890	37,256	619,398
Franklin	265,517	92,703	23,775,174
Fulton	86,995	117,902	2,565,042
Greene	230,594	107,748	13,554,374
Huntingdon	168,818	186,076	9,445,678
Indiana	256,023	172,164	12,945,069
Jefferson	104,220	135,722	5,362,623
Juniata	97,509	66,557	6,351,175
Lancaster	462,833	76,858	70,724,908
Lawrence	148,509	50,665	11,614,044
Lebanon	139,481	43,883	19,016,808
Lehigh	181,097	39,217	23,555,476
Luzerne	194,115	174,381	21,565,724
Lycoming	163,892	143,291	11,212,366
M'Kean	28,164	50,689	1,566,250
Mercer	260,109	129,056	22,048,299
Mifflin	97,687	60,763	9,133,277
Monroe	85,663	110,311	4,459,114
Montgomery	256,909	27,877	40,902,050
Montour	53,182	16,483	4,615,655
Northampton	170,062	15,404	20,991,169
Northumberland	147,129	46,452	12,430,987
Perry	136,809	126,225	8,750,895
Philadelphia	37,518	2,786	18,945,000
Pike	27,303	88,459	2,213,325
Potter	56,307	111,727	2,942,348
Schuylkill	109,135	75,318	8,643,655
Snyder	92,580	45,313	5,769,403
Somerset	249,615	254,442	12,043,715
Sullivan	36,689	69,353	1,658,109
Susquehanna	290,997	150,016	16,707,011
Tioga	187,305	166,798	10,923,925
Union	70,752	19,075	7,891,977
Venango	122,874	98,340	7,211,006

LAND—IMPROVED AND UNIMPROVED—*Continued.*

	Acres of improved land..	Acres of unimproved land..	Present value of farms....
Warren.	83,762	134,508	$6,976,674
Washington ..	409,863	114,004	39,015,006
Wayne .	110,718	200,880	8,816,220
Westmoreland..	342,083	144,014	28,210,826
Wyoming .	87,953	72,212	6,633,160
York .	411,341	133,181	36,358,484
	11,515,965	6,478,235	1,043,481,582

TABLE *showing the entire annual value of the products of Agriculture by counties.*

[The census returns in kind being reduced to each value. To remedy deficiencies of returns in 1870, and the annual increase to 1875, we recommend fifty per cent. to the last table.]

COUNTIES.	Products of farms	Home manufactures	Animals slaughtered or sold for slaughter	Live stock	Dairy products	Wool	All other products	Entire products of each county
Adams	$3,820,438	$2,920	$498,545	1,722,610	319,240	$13,148	$4,567	$6,381,468
Allegheny	4,043,871	69,875	472,794	3,015,224	490,734	154,237	39,382	8,286,117
Armstrong	2,507,100	9,632	394,227	1,915,150	323,682	63,034	6,861	5,219,686
Beaver	1,760,626	2,487	348,199	1,576,277	318,178	210,953	17,030	4,233,750
Bedford	1,906,253	12,667	256,393	1,298,205	152,451	30,352	8,086	3,664,407
Berks	16,179,483	10,195	1,263,649	4,544,490	901,761	5,429	12,817	22,917,824
Blair	1,447,840	357	187,971	798,164	101,877	9,833	3,643	2,549,685
Bradford	4,720,050	20,245	752,712	4,262,095	1,262,561	61,126	40,521	11,119,310
Butler	5,490,959	19,997	1,151,645	4,357,108	1,054,315	8,759	10,040	12,092,823
Bucks	2,964,622	14,703	518,968	2,467,001	483,176	112,110	11,046	6,571,626
Cambria	1,074,925	16,155	173,344	833,361	145,733	23,772	7,522	2,274,812
Cameron	201,179	200	12,520	73,220	16,421	1,064	1,315	305,919
Carbon	292,943	50	42,390	202,974	28,332	615	234	567,538
Centre	2,626,469	1,550	354,207	1,332,555	174,552	26,724	363	4,516,420
Chester	5,759,638	80,075	2,181,799	5,192,517	1,078,463	15,888	12,147	14,320,527
Clarion	1,568,836	6,932	311,902	1,317,708	188,556	44,398	3,358	3,441,690
Clearfield	1,371,084	7,272	248,426	931,661	150,971	28,536	3,012	2,740,962
Clinton	1,068,566	1,957	126,217	530,152	74,139	13,574	1,880	1,816,485
Columbia	1,790,979	4,730	282,616	1,064,968	156,886	11,163	4,531	3,315,873
Crawford	3,784,832	123,690	765,210	3,702,266	804,257	115,332	20,234	9,315,821
Cumberland	8,544,509	5,902	555,707	1,909,461	290,317	14,069	5,526	11,325,491
Dauphin	2,843,888	14,997	475,479	1,660,572	268,993	4,981	8,384	5,277,294
Delaware	1,368,141	38,566	406,920	1,605,657	512,642	500	227	3,932,653
Elk	211,944	48	34,856	206,706	36,311	3,554	501	493,920
Erie	3,810,413	14,093	656,260	2,930,156	688,520	85,412	18,539	8,203,393
Fayette	2,348,090	14,507	605,767	2,095,444	231,516	143,376	48,816	5,487,516
Franklin	155,560	1,466	23,769	127,114	21,055	3,307	1,179	333,450
Fulton	3,975,245	24,876	579,709	2,270,161	301,249	15,581	3,949	7,170,770
Forest	629,816	3,518	100,966	474,654	57,390	10,220	1,184	1,277,748

Greene	1,859,632	21,586	398,572	1,875,272	253,554	222,244	47,863	4,678,723
Huntingdon	2,133,806	32,836	242,017	1,434,648	155,717	27,055	4,211	4,030,290
Indiana	2,607,107	17,879	455,914	2,174,542	368,415	62,995	6,959	5,693,811
Jefferson	1,256,455	6,750	191,075	941,012	166,018	28,310	4,730	2,594,350
Juniata	1,320,283	2,378	159,332	635,850	100,122	8,469	1,997	2,228,431
Lancaster	9,727,074	39,708	2,371,860	6,044,215	844,002	10,046	24,867	19,061,772
Lawrence	1,706,439	1,172	299,796	1,373,251	241,389	134,063	7,979	3,764,089
Lebanon	2,718,700	4,804	477,381	1,620,335	292,957	2,603	6,475	5,123,255
Lehigh	2,393,336	19,528	457,683	1,949,157	320,656	4,384	15,203	5,159,947
Luzerne	2,738,362	18,585	410,612	2,056,063	372,904	19,277	10,246	5,626,049
Lycoming	1,963,217	416,625	135,940	1,244,900	150,176	12,902	4,624	3,928,384
M'Kean	462,617	5,222	84,579	372,162	69,942	14,008	5,193	1,013,723
Mercer	3,118,007	21,273	710,626	2,784,612	535,840	123,319	21,022	7,314,699
Mifflin	1,414,232	1,089	187,526	808,039	140,811	10,228	1,465	2,563,390
Monroe	834,915	12,063	149,864	677,047	99,583	6,019	2,936	1,782,427
Montgomery	4,498,190	1,894	1,298,321	3,835,237	1,340,112	2,804	7,049	10,983,607
Montour	703,930	2,446	116,453	419,606	65,027	3,378	401	1,311,241
Northampton	2,643,357	1,271	435,294	1,900,042	297,104	7,135	6,903	5,291,106
Northumberland	1,995,774	1,787	300,667	1,113,983	164,815	7,879	2,152	3,587,057
Perry	1,726,438	10,843	260,014	948,988	12,583	10,224	1,935	2,971,025
Philadelphia	1,873,869	5,075	63,967	659,695	125,186	150	905	2,728,847
Pike	374,442	581	50,346	309,090	55,191	1,608	1,300	792,558
Potter	824,923	10,239	95,064	672,291	160,548	26,230	12,484	1,801,779
Schuylkill	1,656,723	182,789	259,295	951,979	134,289	3,342	7,772	3,196,199
Somerset	1,204,996	3,067	170,035	651,113	80,421	4,683	1,384	2,115,699
Snyder	1,879,158	36,933	262,306	1,666,233	448,180	40,088	89,550	4,422,448
Sullivan	433,155	6,758	80,501	351,901	76,683	10,608	251,793	1,211,399
Susquehanna	3,104,024	18,244	572,688	3,277,763	869,500	54,292	15,275	7,911,786
Tioga	2,742,723	13,813	323,737	2,074,117	562,619	44,894	30,636	5,792,539
Union	1,311,345	....	230,239	658,911	88,684	4,269	2,391	2,295,839
Venango	1,313,560	13,915	217,484	1,150,153	172,052	46,283	4,496	2,917,943
Warren	1,270,993	4,768	185,901	1,063,503	255,916	25,403	8,140	2,814,624
Washington	4,146,805	4,432	870,401	3,938,335	395,060	931,376	19,637	10,306,046
Wayne	1,697,178	3,255	272,558	1,731,055	336,231	24,763	5,713	4,070,753
Westmoreland	4,243,247	10,292	675,021	3,028,081	407,951	89,325	19,148	8,473,065
Wyoming	1,127,323	12,103	174,000	822,811	150,992	9,807	9,502	2,306,538
York	6,408,657	14,072	982,874	4,013,452	596,781	19,547	22,192	12,057,575
	171,703,301	1,503,737	28,413,110	115,647,075	21,542,289	3,285,057	983,422	343,077,991

AGRICULTURAL PRODUCTIONS OF PENNSYLVANIA IN 1870.

Products.	Acres.	Production.	Relative rank with other States
Wheat	1,193,765	19,672,967 bush.	Sixth.
Rye	228,493	3,577,641 ..do..	First.
Indian corn	1,105,746	34,702,206 ..do..	Eighth.
Oats	1,017,580	36,478,585 ..do..	Second.
Barley	25,376	529,562 ..do..	Ninth.
Buckwheat	97,156	2,532,173 ..do..	Second.
Peas and beans		39,574 ..do..	Twenty-third.
Potatoes	104,491	12,889,367 ..do..	Second.
Clover seed		200,679 ..do..	First.
Flax seed		15,624 ..do..	Eighth.
Grass seed		50,642 ..do..	Fifth.
Tobacco	2,826	3,467,529 lbs.	Twelfth.
Wool		6,561,722 ..do..	Fifth.
Butter		60,834,644 ..do..	Second.
Cheese		1,145,209 ..do..	Ninth.
Hops		90,688 ..do..	Twelfth.
Flax		815,906 ..do..	Fourth.
Maple sugar		1,545,917 ..do..	Sixth.
Honey		796,989 ..do..	Sixth.
Beeswax		27,033 ..do..	Seventh.
Hay	2,204,301	2,848,219 tons.	Second.
Hemp		571 ..do..	Fourth.
Wine		97,165 gals.	Fifth.
Milk sold		14,411,729 ..do..	Fourth.
Sorghum molasses		213,373 ..do..	Fourteenth.
Maple molasses		39,385 ..do..	Fifth.
Horses		460,339 ..do..	Sixth.
Mules		18,009 ..do..	Sixteenth.
Milk cows		706,437 ..do..	Second.
Working oxen		30,048 ..do..	Nineteenth.
Other cattle		608,066 ..do..	Eighth.
Sheep		1,794,301 ..do..	Fifth.
Swine		867,548 ..do..	Eleventh.

AMERICAN MANUFACTURES AS SEEN BY AN ENGLISH DIPLOMATIST.

The British Government in 1872, instructed her Secretaries of Legation to report upon the condition of what are called textile manufacturing establishments in different countries to which they were accredited. Their instructions, especially, directed them to inquire into the rates of wages, the hours of labor and the cost of manufacturing, as compared with similar things at home. The idea is a capital one of having a report by their own employees to enlighten their own manufacturers and workmen. If our government has any unemployed secretaries, with the industry of this Secretary of the British Legation, at Washington, they had better instruct them to follow his example. Such officials have advantages not usually possessed by most persons. Reports from all officials are promptly furnished them, and if they will visit and personally inspect manufacturing establishments with their own eyes every facility is offered them. J. P. Harris Gastrell must have been very industrious. His report upon the condition of manufactures in the United States, and, especially, upon cotton, woollen, worsted goods, flax, silk, jute, &c., is very exhaustive, covering 537 pages. The reports from all other countries covering only about one-third of this official volume. We should feel highly complimented by the space assigned and still more so by the industry, accuracy and liberality of this entire report. Our American manufacturers are conceded almost every thing they can justly claim. The department which he was specially commissioned to examine has probably the most complicated machinery of any other branch of American industry. He, unhesitatingly, admits that our machinists are ahead of the British, in adapting delicate instruments to accomplish their purposes. He admits that our iron is tougher and better suited to make machines for cording, spinning, weaving, dyeing and finishing the products of textile fabrics.

He gives elaborate statistical tables, showing for forty years past, the growth and magnitude of these branches of business, their increase from year to year in supplying our own markets, and warns Great Britain, that, at no distant day, she is likely to find us a formidable competitor for her foreign markets. He ascribes our success to the better adaptation of our machinery to perform this class of work. He thinks we have been forced to construct this machinery because of the high price of labor in this country. He admits that our mechanics handle our machinery with greater skill and that, I have no doubt, is because they are better educated. The drawbacks to our complete and final success, which he thinks is only a question of time, is the greater value of capital, the shorter hours by our workmen and the higher price paid for labor. He thinks that our workmen aggravate all these drawbacks by their frequent strikes.

He notes another drawback to our ultimate success in producing cheap fabrics in this country, to wit: That our great mills are run by a few corporations, and the owners can readily agree upon the quantity to be thrown upon the market. He thinks the English system of individual ownership is much better. In this he is undoubtedly correct. His references are to the great manufacturing corporations of New England. Had such a system never been introduced into our republican country it would have been greatly better; but having gotten a foothold it is not easy to change it. Small manufactures cannot live in competition with these mammoth corporations, and thus each year the whales are swallowing up the minnows. Thus a very few operators can meet, combine and keep up the prices.

In another branch, to wit: Mining of coal in Eastern Pennsylvania, the truth of this position is clearly demonstrated. A dozen of coal companies control the trade in the anthracite and semi-bituminous regions of the State.

Even upon the subject of our protective tariffs he is much more moderate than the average American free-trader. He knows that England protected all her own industries until they became so strong that no competition could endanger them. He don't like our tariff laws because they diminish the demand for British manufactures; but then he don't foam and rage like the active free-traders.

The report will do good. Its circulation will be amongst those who, under other circumstances, would never see or hear such statements. This report was probably intended for home consumption, and not to be circulated in the United States. A very few have crossed the Atlantic, and this is all the space we can spare to note this remarkable document.

MANUFACTURING INDUSTRY AS SHOWN BY THE CENSUS OF 1870.

	Number of establishments......	Annual value of manufactures in each county in 1870..........	Estimated value of manufactures for 1875, being 50 per centum added for omissions and increase in 5 years,
Adams	502	$1,415,126 00	$2,122,689 00
Allegheny	1,844	88,789,414 00	133,184,121 00
Armstrong	276	4,337,357 00	6,506,035 00
Beaver	500	4,024,083 00	6,036,124 00
Bedford	369	1,587,024 00	2,380,536 00
Berks	1,414	16,243,453 00	24,365,179 00
Blair	440	6,428,366 00	9,642,549 00
Bradford	531	2,738,395 00	4,107,592 00
Bucks	739	4,732,118 00	7,098,177 00
Butler	387	1,330,032 00	1,995,048 00
Cambria	373	8,641,813 00	12,962,719 00
Cameron	44	896,810 00	1,345,215 00
Carbon	161	2,955,783 00	4,433,674 00
Centre	362	3,047,674 00	4,571,511 00
Chester	996	11,494,543 00	17,241,814 00
Clarion	279	1,355,506 00	2,033,259 00
Clearfield	245	1,109,405 00	1,664,107 00
Clinton	241	3,646,526 00	5,469,789 00
Columbia	258	2,706,290 00	4,059,435 00
Crawford	743	10,157,009 00	15,235,513 00
Cumberland	449	3,249,032 00	4,873,548 00
Dauphin	587	13,514,156 00	20,271,234 00
Delaware	314	11,041,654 00	16,562,484 00
Elk	81	1,524,392 00	2,286,588 00

MANUFACTURING INDUSTRY—*Continued.*

	Number of establishments......	Annual value of manufactures in each county in 1870..........	Estimated value of manufactures for 1875, being 50 per centum added for omissions and increase in 5 years,
Erie	928	$9,697,987 00	$14,546,980 00
Fayette	402	3,527,404 00	5,291,106 00
Forest	37	393,191 00	589,786 00
Franklin	529	3,621,349 00	5,432,023 00
Fulton	65	512,433 00	768,649 00
Greene	162	573,050 00	859,575 00
Huntingdon	324	2,319,152 00	3,478,728 00
Indiana	473	1,393,408 00	2,090,112 00
Jefferson	232	1,238,613 00	1,857,919 00
Juniata	204	678,345 00	1,017,522 00
Lancaster	1,616	14,034,180 00	21,051,270 00
Lawrence	181	3,439,700 00	5,159,550 00
Lebanon	481	4,160,084 00	6,240,126 00
Lehigh	694	15,480,848 00	23,221,272 00
Luzerne	886	17,493,463 00	26,239,694 00
Lycoming	608	9,081,406 00	13,622,109 00
M'Kean	36	358,984 00	538,976 00
Mercer	458	6,544,277 00	9,816,415 00
Mifflin	194	1,616,985 00	2,425,477 00
Monroe	254	2,232,539 00	3,348,808 00
Montgomery	1,089	16,933,703 00	25,400,554 00
Montour	158	4,857,602 00	7,286,403 00
Northampton	655	12,530,834 00	18,796,251 00
Northumberland	424	4,207,855 00	6,311,282 00
Perry	282	2,412,626 00	3,618,939 00
Philadelphia	8 184	322,004,517 00	483,006,775 00
Pike	67	692,313 00	1,038,469 00
Potter	41	249,724 00	374,586 00
Schuylkill	844	9,586,114 00	14,379,171 00
Snyder	496	1,240,671 00	1,861,006 00
Somerset	98	591,449 00	887,173 00
Sullivan	83	390,877 00	586,315 00
Susquehanna	376	3,225,054 00	4,837,581 00
Tioga	282	2,190,852 00	3,286,278 00
Union	106	1,288,692 00	1,933,038 00
Venango	278	4,516,566 00	6,774,849 00
Warren	450	3,224,768 00	4,837,152 00
Washington	402	2,037,441 00	3,056,161 00
Wayne	291	3,714,075 00	5,571,112 00
Westmoreland	390	2,592,487 00	3,888,730 00
Wyoming	194	1,013,831 00	1,520,746 00
York	1,111	7,028,934 00	10,543,401 00
		711,894,234 00	1,067,841,351 00

FINANCIAL.

THE RECEIPTS AND EXPENDITURES OF THE NATIONAL GOVERNMENT FOR TWELVE YEARS.

The United States collected the amounts specified in the following table from each source of revenue from 1861 to 1873, inclusive, viz:

1—SOURCES AND AMOUNTS OF REVENUE RECEIPTS.

Fiscal years.	Customs.	Int. revenue.	Direct tax.	Public lands.	Premium on loan and sales of coin.	Miscellaneous.	Net revenue.	Loans and treas'y notes.
1861-62	$49,056,397		$1,795,332	$152,234	$68,400	$915,122	$51,987,455	$529,692,460
1862-63	69,059,642	$37,640,788	1,485,104	167,617	602,345	3,741,794	112,697,291	776,682,361
1863-64	102,316,153	109,741,134	475,649	588,333	21,174,101	30,331,401	264,626,772	1,128,834,246
1864-65	84,928,261	209,464,215	1,200,573	996,553	11,683,447	25,441,556	333,714,605	1,472,224,741
1865-66	179,046,651	209,226,813	1,974,754	665,031	38,083,056	29,036,414	558,032,620	712,851,553
1866-67	176,417,811	266,027,537	4,200,234	1,163,576	27,787,330	15,037,522	490,634,010	640,426,910
1867-68	164,464,599	191,687,589	1,788,146	1,348,715	29,203,629	11,745,403	405,638,083	625,111,423
1868-69	180,048,427	158,356,461	765,686	4,020,344	13,755,491	13,997,339	370,843,747	238,678,081
1869-70	194,538,374	184,899,756	229,103	3,350,482	15,295,644	12,942,118	411,255,478	285,474,496
1870-71	206,270,408	143,098,154	580,355	2,388,647	8,892,840	22,093,541	383,323,945	268,768,523
1871-72	216,370,287	130,643,178		2,575,714	9,412,638	15,106,057	374,106,868	305,047,054
1872-73	188,089,523	113,729,314	315,255	2,882,312	11,560,531	17,161,270	333,738,205	214,931,017

RECEIPTS AND EXPENDITURES.—CONTINUED.

The expenditures of the National Government from 1861 to 1873 are shown in the following table, also the amount expended by each Department:

2—OBJECTS AND AMOUNTS OF REVENUE DISBURSEMENTS.

Fiscal years.	Premiums on loans and purchase of bonds.	Civil and miscellaneous.	War Dep't.	Navy Dep't.	Indians.	Pensions.	Interest on public debt.	Net ordinary expenditures.	Redemption of loans, etc.
1861-62	....	$21, 408, 491	$394, 368, 407	$42, 668, 277	$2, 273, 223	$853, 065	$13, 190, 324	$474, 761, 819	$96, 096, 922
1862-63	....	23, 256, 965	599, 298, 601	63, 221, 964	3, 154, 357	1, 078, 922	24, 729, 847	714, 740, 725	181, 086, 635
1863-64	....	27, 505, 399	690, 791, 543	85, 725, 995	2, 029, 859	4, 983, 924	53, 685, 421	865, 322, 642	432, 822, 614
1864-65	$1, 717, 900	43, 047, 658	1, 031, 323, 361	122, 612, 955	5, 116, 835	16, 338, 811	77, 397, 712	1, 197, 555, 224	607, 361, 242
1865-66	58, 476	41, 056, 962	284, 449, 702	43, 324, 118	3, 247, 064	15, 605, 352	133, 067, 742	520, 409, 417	620, 263, 249
1866-67	10, 813, 349	57, 110, 224	95, 224, 416	31, 034, 011	4, 642, 932	20, 936, 552	143, 781, 592	357, 547, 675	735, 536, 980
1867-68	7, 001, 151	53, 009, 868	123, 246, 649	25, 775, 503	4, 100, 682	23, 782, 387	140, 424, 046	377, 340, 285	962, 549, 686
1868-69	1, 674, 680	56, 474, 061	78, 501, 991	20, 000, 758	7, 042, 923	28, 476, 622	130, 694, 243	322, 865, 278	261, 912, 718
1869-70	15, 996, 556	53, 237, 461	57, 655, 675	21, 780, 230	3, 407, 938	28, 340, 202	129, 235, 498	309, 653, 561	393, 254, 282
1870-71	9, 016, 795	60, 481, 916	35, 799, 992	19, 431, 027	7, 426, 997	34, 443, 895	125, 576, 566	292, 177, 188	399, 518, 729
1871-72	6, 958, 267	61, 984, 757	35, 372, 157	21, 249, 810	7, 061, 729	28, 533, 403	117, 357, 840	277, 517, 963	405, 007, 308
1872-73	5, 105, 920	73, 328, 110	46, 323, 138	23, 526, 257	7, 957, 705	29, 359, 427	104, 750, 688	285, 269, 325	233, 699, 353

STATEMENT *of receipts at the State Treasury from the several sources of revenue during the fiscal years ending November* 30, 1872, *and November* 30, 1873.

SOURCES OF REVENUE.	1872.	1873.
Corporations.		
Railroad, canal, express, navigation and transportation companies	$2,412,730 75	$2,869,082 80
Coal, iron, improvement, mining and manufacturing companies	438,197 88	660,538 52
Passenger railway companies	74,134 40	74,537 19
Bridge, turnpike and plank road companies	31,231 61	34,368 25
Banks	341,021 31	342,499 63
Counties, cities and boroughs	102,464 21	107,057 19
Gas and water companies	36,750 26	50,633 92
Oil companies	90,482 93	48,221 37
Telegraph companies	6,564 50	7,952 01
Insurance companies, (domestic,)	116,389 59	113,990 76
Insurance companies, (foreign,) licenses, &c	351,396 08	353,490 78
Premiums on corporation charters	101,584 74	68,343 76
Annuity for right of way, (Erie railroad,)	10,000 00	10,000 00
All other companies and associations	24,693 01	46,636 00
Miscellaneous taxes.		
Tax on personal property	561,316 12	541,607 91
Notaries Public, tax on receipts	1,683 67	2,711 27
Notaries Public, commissions		7,450 00
Tax on enrolment of laws	30,080 00	36,800 00
Tax on logs	900 00	1,500 00
Tax on writs, wills, deeds, &c	119,380 32	113,117 52
Tax on certain offices	20,770 56	10,723 89
Collateral inheritance tax	354,819 98	327,973 99
Tavern licenses	346,116 70	321,322 73
Retailers' licenses	424,941 83	424,974 89
Theatre, circus and menagerie licenses	3,020 45	5,121 75
Billiard, bowling saloon and ten-pin alley licenses	7,064 59	10,552 94
Eating-house, beer-house and restaurant licenses	42,316 81	42,165 02
Peddlers' licenses	2,679 61	2,830 38
Brokers' licenses	5,335 75	10,736 98
Patent medicine licenses	1,112 00	3,875 91
Brewery and distillery licenses	5,821 45	8,099 47
Millers' tax	641 16	4,486 84
Pamphlet laws	510 20	714 67
Fees of public officers	5,801 00	19,681 57
Auctioneers' commissions and duties	36,703 97	
Auctioneers' commissions		13,765 34
Fines and penalties		4 00
Collections on outstanding indebtedness.		
Refunded cash	4,938 05	3,715 70
Dividends on bridge stocks	240 00	
Sale of public property and escheats	26,202 45	
Sale of public property		100 00
Cases of conscience	880 00	945 00
Accrued interests	4,204 31	4,297 97
Lands patented	45,724 73	53,035 48
Commutation of tonnage tax, as per act, 1861	460,000 00	230,000 00
Allegheny Valley railroad, interest on bonds, per act 1869,	87,500 00	87,500 00
	6,738,346 95	7,077,073 40

TABLE *showing expenditure of the Commonwealth for the years* 1872 *and* 1873.

	1872.	1873.
Senate	$171,845 04	$107,037 37
House of Representatives	236,689 89	260,763 88
Public printing	101,047 21	131,916 43
Executive department	30,830 69	40,503 39
Judiciary	331,474 30	348,916 01
Public officers	83,034 53	94,513 79
Military expenses	22,122 17	72,242 82
Packing and forwarding laws	1,290 00	1,383 90
Paid electors of President and Vice President		703 00
Constitutional Convention		410,723 80
Pensions and gratuities	54,831 11	50,334 57
Centennial Committee	6,325 31	6,755 14
Charitable institutions	441,527 10	439,307 13
Soldiers' orphan schools	471,986 41	469,308 94
Common schools	667,191 50	804,097 89
Pennsylvania State Agricultural Society	2,000 00	2,000 00
Amendments to Constitution	10,900 96	7,366 94
Loans redeemed, &c	2,511,172 87	1,551,762 57
Interest on loans	1,706,032 88	1,563,029 20
Damages and old claims	13,670 23	2,206 97
Harbor master, Philadelphia	1,874 99	2,708 34
Port warden, Philadelphia	2,500 00	2,499 99
Inspectors of coal mines	24,775 03	23,223 06
State library	6,550 00	8,750 00
Public buildings and grounds	29,636 64	90,591 23
Houses of Refuge	71,900 00	55,325 00
Penitentiaries	58,324 30	73,882 02
Escheats	7,459 34	693 80
Counsel fees and commissions	8,332 22	3,000 00
Special commissioners	2,619 57	13,255 00
Commissioners to adjust claims for damages in border counties	7,945 19	
Mercantile appraisers	1,784 79	2,188 47
Luzerne county riots	538 34	
Board of Public Charities	5,943 18	7,543 23
Revenue commissioners	1,800 00	
County surveyors	1,960 00	5,865 00
Assessors of bank stock		15,071 19
Inaugural expenses		4,974 19
Funeral of ex-Governor John W. Geary		4,306 41
Miscellaneous	45,074 64	50,026 90
	7,142,990 43	6,734,027 57

The State debt as shown by the statement of the Commissioners of the Sinking Fund, October 1, 1874, was as follows:

Debt bearing coin interest	$4,423,500 00
Debt bearing interest in United States currency	19,668,000 00
Debt on which interest has been stopped	135,433 03
Debt bearing no interest	100,669 38
Chambersburg certificates, act May 27, 1871	83,032 96
Agricultural College land script fund of Pennsylvania	500,000 00
	24,910,635 37

WHAT PENNSYLVANIA PAYS FOR INSURANCE.

Very few persons have any idea what the aggregate of insurance is, in all its forms, paid by the people of our State. One year since, an insurance bureau was organized by the Legislature, and we now have the first annual report of the Commissioner for 1873, in two volumes—one Fire and Marine, the other Life Insurance. According to Mr. Foster's report, there was paid last year to

Fire and marine stock companies chartered by our State....		$13,761,052
Fire and marine mutual companies chartered by our State...		1,650,497
		15,411,549
Deduct one-fifth for receipts from business done in other States,		3,082,309
		12,329,240
Receipts of other State and European companies having agencies in this State..................................		3,272,477
Pennsylvania paid for fire and marine insurance in 1873.....		15 601,717
Life insurance paid in 1873, life insurance companies chartered by the State, partly estimated,	$2,000,000	
Agencies of companies chartered by other States on business done in this....................	6,016,236	
		8,016,236
		23,617,953

This aggregates more than three times the entire revenue collected by the State, or, in other words, the people of the State, in 1873 paid for insurance equivalent to $6 30 for every man, woman and child within the State.

Some of the details of the above summary will be more fully comprehended by reference to the following. Full details can be seen in the Commissioner's report:

BUSINESS DONE BY INSURANCE COMPANIES IN PENNSYLVANIA.

	Risks in force Dec. 31, 1873.	Premiums received during 1873	Losses paid 1873.	Percentage of losses to risks in force .....
Joint stock fire companies chartered by Pennsylvania	$927,719,775	$10,557,068	$6,183,379	00.66
Mutual companies chartered by Pennsylvania...........................	435,215,298	1,106,743	1,087,361	00.24
Joint stock fire companies chartered by other States.....................	2,853,636,516	38,649,712	24,123,306	00.84
Agencies of European fire companies,	792,798,310	12,368,683	6,849,821	00.92
Life insurance companies chartered by Pennsylvania....................	52,669,914	592,777	579,246	01.09
Life insurance companies chartered by other States........................	174,406,781	6,016,236	2,136,964	01.22
Aggregate	5,236,446,594	69,291,219	40,960,077	00.78
Pennsylvania joint stock inland and marine companies	$31,457,817	$3,203,984	$2,845,517	09.04
Other States joint stock inland and marine companies	13,928,115	2,379,194	1,583,352	11.36
Aggregate	45,385,932	5,583,178	4,428,869	09.75

CONDITION OF INSURANCE COMPANIES DOING BUSINESS IN PENNSYLVANIA.

	Paid up capital.	Assets.	Income.	Expenditures.
Pennsylvania joint stock fire and marine companies.......	$9,387,823	$24,853,984	$13,666,753	$12,644,044
Other States joint stock fire and marine companies	29,779,285	55,584,409	39,819,529	36,270,434
Aggregate..............	39,167,108	80,438,393	53,486,292	48,914,478
European fire insurance companies........................	$4,202,475	$10,979,893	$11,076,080	$9,750,286
	Assets.	Liabilities.	Income.	Expendit's.
Pennsylvania mutual fire insurance companies...........	$203,019,906	$200,086,746	$1,941,837	$1,632,789
Pennsylvania life insurance companies	$13,642,476	$10,971,847	$4,105,620	$2,780,728
Life insurance companies of other States..................	351,795,356	306,198,935	113,982,930	81,772,409
	365,437,832	317,170,782	118,088,550	84,563,137

The Commonwealth received, in 1872 and 1873, taxes paid by insurance companies as follows, viz:

	1872.	1873.
From companies chartered by our State, tax on corporation stocks and net earnings....................................	$116,396 59	$113,990 76
From other State and European companies, tax on licenses and premiums..	351,396 08	353,490 78
	467,792 67	467,481 54

COST OF PUBLIC WORKS AND THE STOCKS OF CORPORATIONS.

WASHINGTON, D. C., *March* 14, 1874.

His Excellency JNO. F. HARTRANFT:

DEAR SIR:—If you can conveniently aid in obtaining authentic facts as to the cost of construction, annual amount of expenditure, and annual amount of income of the Pennsylvania Central railroad, while it was the property of and controlled by the State, you will greatly favor

Your obedient servant,

JAS. S. BIERY.

A duplicate of my answer to the Hon. George B. Loring was sent to Hon. Jas. S. Biery, M. C.

MASSACHUSETTS SENATE, PRESIDENT'S ROOM,
BOSTON, *March* 20, 1874.

MY DEAR SIR:—I have the honor and pleasure to acknowledge the receipt of valuable documents relating to public affairs, railroads, &c., in Pennsylvania. Please accept my thanks for your kind attention in forwarding them.

Fifteen or twenty years ago the State of Pennsylvania sold out their interest in the Pennsylvania Central railroad, as an act of benefit to the road and State both. I suppose that act was the result of certain investigations and reports by commissioners. Are such reports to be had? A proposition to run Massachusetts into State ownership of railroads, is before us, and I am very anxious to learn what was done by Pennsylvania under similar circumstances.

If the reports to which I allude cannot be obtained as public documents, can you inform me where I can find them?

Truly and respectfully yours, &c.,

GEO. B. LORING.

His Excellency JNO. F. HARTRANFT,
Governor of Pennsylvania, Harrisburg.

COMMONWEALTH OF PENNSYLVANIA,
OFFICE OF BUREAU OF STATISTICS OF LABOR AND AGRICULTURE,
HARRISBURG, *May* 4, 1874.

HON. GEORGE B. LORING,

DEAR SIR:—Governor Hartranft has referred to my Bureau your letter of March 20, asking certain questions in regard to our State having sold out her interest in the Pennsylvania Central railroad some fifteen or twenty year since.

Pennsylvania at no time held stock in the railroad of that name; she, however, had a pretty large experience in the ownership and management of public works—chiefly canals. About 1826, our State, in her corporate capacity, commenced the construction of what was known as her main line from Philadelphia to Pittsburg, this was composed of about 126 miles of railroad and about 292 miles of canal. This main line was completed about 1831 and cost the State about $18,615,663.

While bills to complete this main line were pending in the Legislature, a system of "log-rolling" was inaugurated by which seven or eight branch canals were also put under contract—the whole expenditure for which reached about $17,000,000. An account current might be stated as follows, viz:

Pennsylvania main line, canal and railroad, about 416 miles	$18,615,663 00
Delaware, Susquehanna, North and West Branch divisions, of canal, costing	10,965,569 61
Beaver, Erie, French Creek, one or two others, none of these finished by the State	5,589,234 34
	35,170,466 95

These public works were managed by a board of three canal commissioners. For about twelve years they were appointed by the Governor; for the last fifteen years elected by the people—one each year. The main line and Delaware Division paid something, probably two per cent., on the cost of investment, exclusive of management. The second class of branches did not pay, on an aggregate, the cost of management. The third class being unfinished were given away to companies to finish, and the State never received anything.

About 1844, commenced an agitation which resulted, thirteen years thereafter, in selling out these works and disconnecting the State from all management. The question did not turn so much upon their unproductiveness as upon their corrupting influence on State politics. The canal commissioners, as the people generally believed, being engaged in running the politics of the State, rather than attending to their legitimate functions.

The main line costing $18,615,663, was sold to the Pennsylvania railroad company for $7,500,000. The other finished branches, costing $10,985,569 61, were sold for $3,500,000. The third class, of course, nothing was realized from.

The experiment, you may say, was a costly one to the State, yet, probably, the development which their construction gave to the individual wealth of the citizens was worth five times what was directly lost. An amendment to our State Constitution, adopted in 1857, prohibits the State from building railroads, or in any way aiding, by subscribing stock or otherwise. If Massachusetts would learn a lesson from Pennsylvania, she would not engage in building or managing railroads. Our State abhors this more on account of its demoralizing effects upon politics, than the losses she incurred in their construction. The Pennsylvania railroad was charted in 1846, completed about 1853–4.

It cost from Harrisburg to Pittsburg	$15,237,965 03
From Philadelphia to Harrisburg, old Columbia road, &c.,	5,375,733 43
Equipment, locomotives, cars, &c	7,458,101 14
Real estate and telegraph	5,258,642 55
Improvements at Philadelphia and Pittsburg	1,279,718 55
	34,610,100 70
Its investments in stocks, bonds, &c., in other railroads, on January 1, 1871, were, within the State	90,072,069 82
This investment increased, within the last three years, about	16,000,000 00
Whole investments within the State	140,682,170 52
Estimates have been made that this company has controlling interests in railroads without the State, costing in all probably	500,000,000 00
	640,682,170 52

The above, probably, covers your inquiry to the Governor, if not, please address me as to the point you may desire.

I remain yours,

THOMAS J. BIGHAM.

Commissioner of Statistics.

SEPTEMBER 26, 1874.

NOTE.—This was written over four months before the elaborate report of the committee of stockholders, who reviewed the value of assets, held by the Pennsylvania railroad company. I have not compared them to see wherein they agree, or how far they differ.

Pennsylvania, about 1826, commenced building railroads and canals by State authority. The following table gives an abstract of cost, revenue and expenditures up to January 1, 1844, on main line:

	Cost.	Revenue.	Expenditure.
Columbia and Philadelphia railroad	$4,204,969,96	$3,195,353 99	$2,835,684 32
Eastern division of canal	1,736,599,42	1,436,665 16	434,934 79
Juniata division of canal	3,521,412 21	806,157 13	1,023,286 13
Allegheny Portage railroad	1,828,461 35	1,308,358 82	1,366,534 82
Western division of canal	3,069,877 38	1,165,496 03	848,198 42
	14,361,320 32	7,912,031 13	6,508,638 48
Increased cost of main line, being chiefly building new Portage railroad, from January, 1844, to sale in 1857	4,254,342 68		
	18,615,663 00		
This main line sold to Pennsylvania railroad by act of May 16, 1857	7,500,000 00		
Loss on main line	11,115,663 00		

The following table gives an abstract of cost, revenue and expenditures on branch canals to January 1, 1844:

	Cost.	Revenue.	Expenditure.
Delaware division of canal	$1,381,741 96	$844,670 61	$838,514 26
Susquehanna division of canal	896,379 52	200,586 75	371,882 14
North Branch division of canal	1,580,670 87	169,242 11	541,007 08
West Branch division of canal	1,808,472 10	123,865 39	463,689 84
French Creek division of canal	795,801 74	5,722 94	141,897 12
Beaver division of canal	511,671 19	30,525 33	179,002 62
	6,974,737 38	1,374,613 13	2,535,993 06
Unfinished Improvements.			
North Branch extension of canal	2,484,939 60		
West Branch extension of canal	352,456 79		
Erie extension of canal	3,160,566 76		
Wiconisco feeder	390,013 28		
Allegheny feeder	31,171 56		
Gettysburg extension of railroad	667,917 61		
	14,061,802 98		
Increased cost of branch canals from January, 1844, to sale in 1858	2,422,616 93		
	16,484,419 91		
Branch canals sold to Sunbury and Erie railroad by act of April 21, 1858	3,500,000,00		
Loss on branch canals	12,984,419 91		

Amount of stocks held by Commonwealth on April 8, 1843, in sundry banks, canals, railroads, turnpikes and bridges, chiefly results of log-rolling while improvement system was in vogue:

Amount sold per act of April 3, 1843, (original cost,)	$4,191,783 00	
Sold since, (original cost,)	249,275 94	
*Still held, (original cost,)	1,754,321 62	
		$6,194,380 56
Amount received on account of above.		
Proceeds of sale in 1843	1,405,130 63	
Proceeds of stock since sold, about	35,000 00	
		1,440,130 63
Loss on corporation stock		4,754,249 93
Loss on main line		11,115,663 00
Loss on branch canals		12,984,419 91
Loss of Commonwealth on her public improvements,		28,854,332 84

INDEBTEDNESS OF THE UNITED STATES, COUNTIES, CITIES, RAILROADS AND INDIVIDUALS.

United States, May 1, 1874		$2,149,725,227 02
United States bonds to the various Pacific railroads	$64,623,512 00	
Interest to the various Pacific railroads	17,335,273 19	
		81,958,785 19
Total National		2,231,684,012 21

The several States owe as follows, viz:

Alabama	Oct. 1, 1873	$11,258,836 07
Arkansas	Oct. 1, 1873	10,885,000 00
California	July 1, 1873	3,796,500 00
Connecticut	April 1, 1873	5,095,900 00
Delaware	Jan. 1, 1874	1,231,000 00
Florida	Dec. 31, 1873	5,620,809 27
Georgia	Jan. 1, 1874	14,871,084 00
Indiana	Oct. 31, 1873	4,898,813 34
Illinois	Dec 1, 1872	2,060,150 63
Iowa	Nov. 1, 1873	543,056 15

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*This amount of old corporation stocks has no market value, and is practically worthless.

Kansas	Nov. 30, 1873	$1,336,675 00	
Kentucky	Oct. 10, 1873	2,720,710 72	
Louisiana	Jan. 1, 1874	22,308,800 00	
Maryland	Sept. 30, 1873	10,771,215 60	
Massachusetts	Jan. 1, 1874	28,477,804 00	
Maine	Jan. 1, 1874	7,138,400 00	
Michigan	Sept. 30, 1872	2,243,292 78	
Minnesota	Nov. 30, 1873	250,000 00	
Missouri	Jan. 1, 1873	18,747,000 00	
New Hampshire	Jan. 1, 1873	3,914,195 44	
New Jersey	Nov. 1, 1873	2,696,300 00	
New York	Oct. 1, 1873	36,530,406 40	
Nevada	May 1, 1871	660,000 00	
North Carolina	Oct. 1, 1873	29,547,045 00	
Oregon	Sept. 1, 1872	290,477 00	
Ohio	Sept. 15, 1873	8,221,062 10	
Pennsylvania	Dec. 1, 1873	25,794,061 63	
Rhode Island	April 30, 1873	2,638,500 00	
South Carolina	Dec. 31, 1873	20,650,225 00	
Tennessee	Jan. 1, 1873	20,966,382 19	
Texas	Sept. 1, 1873	3,715,978 88	
Vermont	Aug. 1, 1873	297,500 00	
Virginia	Sept. 30, 1873	45,718,112 23	
Total State debt			355,895,293 43

County Indebtedness.

United States	$180,000,000 00	
Cities:		
1st class, 16 cities over 100,000,	350,000,000 00	
2d class, 12 cities 50,000 to 100,000,	30,000,000 00	
3d class, 53 cities 20,000 to 50,000,	75,000,000 00	
4th class, 105 cities 10,000 to 20,000,	35,000,000 00	
5th class .... cities less than 10,000,	80,000,000 00	
		750,000,000 00

Railroad Indebtedness.

New England States	$122,224,449 00	
Middle States	477,199,070 00	
Western States	883,794,823 00	
Southern States	280,846,999 00	
Pacific States	102,839,109 00	
Total railroad debt		1,866,904,450 00

Banks.

Discount by National banks	$944,223,304 00	
Discount by State banks	514,081,396 00	
Total banks		$1,458,304,700 00
Total indebtedness of the United States		6,612,788,455 64

To meet this enormous indebtedness, we have an amount of national wealth, estimated by the census of 1870, at thirty billion dollars, ($30,000,000,000.)

Our annual income from all industries and earnings, has been estimated, by a high English authority, at six billion dollars, ($6,000,000,000.) He admits we are ahead of Great Britain, France, Russia, Prussia or any of the great European nationalities. He only claims for Great Britain five billion dollars, ($5,000,000,000,) or one-sixth less than he allows to the United States.

My own statement of public indebtedness, prepared prior to Speaker Blaine's address, has been revised, and his statements in reference to the indebtedness of counties and cities adopted. His statement, that State investments in public improvements rarely paid, is strikingly illustrated by the experience of Pennsylvania.

	Cost.	Sold for.
Main line of canal and railroad	$18,615,663 00	$7,500,000 00
Her entire branch canals	16,484,419 00	3,500,000 00
She held stocks in chartered companies	6,194,380 00	1,440,130 00
Loss to the State		28,854,332 00
	41,294,462 00	41,294,462 00

BANKRUPTCIES.

The annual business statement of failures in the year 1873 has been published, and is very interesting. The number is quite large—5,183, as against 3,551 in 1870, and 2,915 in 1871, and 4,069 in 1872. The approach of the revulsion, however, was distinctly foreshadowed by the statistics of the year 1872, when the aggregate liabilities of the failed firms were $121,056,000, as against $88,242,000 in 1870, and $85,252,000 in 1871. Nor can there be any doubt as to the cause of the increased bankruptcies in 1872, Massachusetts exhibiting $25,374,000, as against $20,684,000 for New York city, and Illinois figuring $11,470,000, as against $9,422,000 for

Pennsylvania. The Boston and Chicago conflagrations swept away such enormous values as to precipitate these failures. Insurance, banking and other interests must have been damaged by those conflagrations to an extent the scope of which was not known at the time.

Turning to the great centres of these interests, we find that while the range of liabilities of failed firms in New York city was between twenty and twenty-one millions a year prior to the great panic, the aggregate in 1873 rose to between ninety-two and ninety-three millions. In New York State, outside the city, the amount rose from between eight and nine millions to thirteen and three-quarter millions. In Pennsylvania the rise was from between seven and ten millions to thirty-one and a half millions ; in Massachusetts the liabilities of 1873, though less than half those of 1872, were several millions ahead of preceding experience. The amount in Missouri was more than doubled. Ohio also increased largely. But the rest of the country shows no increase of bankrupt liabilities, except Rhode Island, which leaped suddenly up to fifteen and a quarter millions, in consequence of the Sprague failure. Maryland appears to have had her revulsion in 1872, at the same time with Boston, her bankrupt liabilities having been $5,045,000 in 1872, and only $1,229,000 in 1873. California seems to have had hers in 1871, when her bankrupt liabilities were $4,279,000, against only $1,500,000 in 1873.

From this review the inference must be that this revulsion, although precipitated by the Cooke failure, had been gradually approaching, and was largely caused by the conflagrations in Chicago and Boston. The boast of both cities of having recuperated so suddenly seems to be a dear one to the country, since it has caused all the difference between 2,915 bankruptcies and $85,252,000 of liabilities in 1871, and 4,069 bankruptcies and $121,056,000 liabilities in 1872, and 5,183 bankruptcies and $228,449,000 liabilities in 1873. If it could be supposed that the great increase of bankruptcy in 1872 and 1873 resulted from any inherent unsoundness in the current mode of doing business it might warrant the preaching on the subject in which the journals indulge. But the examination we have given does not justify any such conclusion. San Francisco, Baltimore, Chicago and Boston all appear to have had their cleaning out in 1871 and 1872, and from causes peculiar to themselves. The great strongholds in New York and Philadelphia resisted until the fall of 1873, and then gave way. There is no avoiding the conclusion that the losses of the tremendous conflagrations in Boston and Chicago have been distributed over the country, and that the two cities named have borne but a limited share of them.

Of the failures of 1870 New York city and State had 818 out of 3,551, or less than one-fourth of those of 1871 ; the same city and State had 645 out of 2,915 ; of those of 1872, the same city and State had 808 out of 4,069, or about one-fifth; of those of 1873, the same city and State had 1,188 out of 5,183, or less than one-fifth. Taking the States of New York and Pennsylvania together, they had in 1873 no less than 864 failures, and their liabilities aggregated $137,801,000, so that the storm of 1873 seems to have vented its worst fury on these two States, and chiefly upon Philadelphia, New York and their suburbs. Together these cities centralize all the interests of the republic, and they have suffered for the collected mishaps of all the rest of the country. The calamity burst upon New York with more terrible effects than has been generally known, and the destruction of values has fully equalled the losses by both the Boston and Chicago conflagrations.

It would be folly to deny that the revulsion has developed a vast amount of dishonesty, rottenness, baseless credit and general recklessness. But very much of this exists in all great and prosperous nations, and in all times of active enterprise and commercial spirit. It is surprising how well the country for several years stood the severe trials caused by the speculative combinations in New York, involving, as they must have done, very disastrous losses. It is surprising how well we stood the Boston and Chicago conflagrations. But it is now apparent that all these events were treated too lightly. It was supposed that the losses could be carried without an effort. But the revulsion showed that this was a mistake.

Had not these gigantic speculations and conflagrations unhinged credit so much, our belief is that the whole railway and industrial movement would have been carried along without difficulty. But the Black Friday panic in New York had a corresponding crash of a breadstuffs' corner in Chicago, with the failure of all the connected interests, and New York sustained heavy losses also in the foreign trade from a variety of causes. The aggregated liabilities in bankruptcy in the last two years are three hundred and forty-nine and a half millions of dollars. But if we suppose half of this to be lost, it would form but a small fraction of the general business of the country. The sales of New York city alone amount to three thousand millions of dollars, and those of Philadelphia to about a thousand millions. The losses in New York city, supposing half the liabilities of the bankrupt firms to be lost, would be forty-six millions, or less than one sixty-fifth, and this may fairly be applied to the country at large. So that the condition of business cannot be judged by the failures alone, but must be calculated upon the basis of the whole trade. The business aggregates of this nation increase constantly upon an extraordinary scale. Yet in 1871 there were fewer failures than in 1870, and the liabilities were less.

If the publication of these bankrupt tables shall induce more careful habits of business they will produce good results. But if they generate alarm at the magnitude of the insolvency the effect will be unfortunate.

Just such a panic we have had about railroads, and when we come to examine the subject we find American railroads, on an average, more profitable than the British. So, we have no doubt, the general business of the country would prove, if it could be examined in the same way. A revulsion always brings down many firms that have been tottering for years. It clears the atmosphere and makes times better for all sound and reliable houses. If general business had not been sound we should have seen it in the condition of the banks, whose means must of course be chiefly loaned to business concerns. But the banks have come out of the storm unscathed, and mercantile credit is excellent and trade prospects fair and promising. If Chicago does not burn up again, or Boston kindle a new conflagration, we shall see an active trade during the ensuing season.

BANKING.

TREASURY DEPARTMENT,
OFFICE OF COMPTROLLER OF THE CURRENCY,
WASHINGTON, *October* 10, 1874.

SIR:—I have the honor to enclose you statements giving statistics of the National banks in Pennsylvania, similar to those of the National banks in Ohio, published in the report of the Secretary of State of Ohio for the year 1873.

The statements comprise the statistics on the various subjects treated up to the latest possible date, with the exception of the abstract marked "A," which shows the various items of the resources and liabilities of the banks at the close of business on the 26th of June last.

So soon as the reports of the condition of the banks on the 2d inst. shall be tabulated, an abstract of their resources and liabilities at that date will be sent you as requested in your letter of the 29th ult.

Very respectfully,

JOHN JAY KNOX,
Comptroller

HON. THOS J. BIGHAM,
Commissioner of Statistics of Labor and Agriculture.
Harrisburg, Penn'a.

[A.]

Abstract *of reports made to the Comptroller of the Currency, showing the condition of the national banks in the State of Pennsylvania, and of those in Philadelphia and Pittsburg, at the close of business on the 26th day of June,* 1874.

RESOURCES.	*Pennsylvania.	Philadelphia.	Pittsburg.
Number of Banks	159 Banks.	29 Banks.	16 Banks.
Loans and discounts	$46,604,009 21	$45,163,552 14	$16,133,037 26
Bonds for circulation	26,283,300 00	13,668,200 00	7,558,500 00
Bonds for deposits	710,000 00	225,000 00	50,000 00
United States bonds on hand	554,450 00	321,300 00	278,000 00
Other stocks and bonds	1,969,953 60	1,629,237 82	115,308 93
Due from redeeming agents	5,926,090 35	4,630,112 11	2,368,971 85
Due from national banks	1,766,844 88	2,876,040 00	611,969 62
Due from State banks	1,104,577 55	778,791 67	197,408 21
Real estate, &c	2,002,604 15	2,286,773 65	897,904 19
Current expenses	318,326 85	185,673 47	84,959 55
Premiums paid	400,723 19	188,496 26	46,067 55
Cash items	521,224 59	297,604 50	150,476 73
Exchanges for clearing-house	....	4,976,605 48	548,738 48
Bills of national banks	1,013,768 00	2,012,503 00	437,197 00
Fractional currency	164,814 74	152,428 56	35,657 48
Specie	62,217 71	186,622 47	40,837 46
Legal tender notes	5,360,908 00	6,316,086 00	3,229,795 00
United States certificates of deposit	75,000 00	4,990,000 00	100,000 00
Total	94,838,812 82	90,885,027 13	32,884,829 31
LIABILITIES.			
Capital stock	$27,025,240 00	$16,935,000 00	$9,000,000 00
Surplus fund	7,331,331 54	7,171,997 46	3,079,741 38
Undivided profits	2,149,203 46	1,233,523 76	632,216,53
National bank circulation	23,136,927 00	11,802,777 00	6,555,756 00
State bank circulation	95,944 00	42,527 00	16,614 00
Dividends unpaid	143,009 22	60,277 71	34,695 25
Individual deposits	31,081,823 89	42,362,374 92	11,435,464 66
United States deposits	372,629 02	154,416 74	45,000 00
Deposits of U. S. disbursing officers	7,770 43	....	....
Due to national banks	2,395,241 59	8,486,505 14	1,157,272 67
Due to State banks	607,568 47	2,630,627 40	913,117 06
Notes re-discounted	434,602 89	5,000 00	14,951 76
Bills payable	57,521 31	....	....
Total	94,838,812 82	90,885,027 13	32,884,829 31

*Exclusive of the banks in Philadelphia and Pittsburg.

[B.]

Nᴀᴛɪᴏɴᴀʟ Bᴀɴᴋs *in the State of Pennsylvania, with the amount of capital stock and circulation of each October* 1, 1874, *as shown by the books of the office of Comptroller of the Currency.*

LOCATION.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Allegheny	Allegheny	First National Bank	198	$350,000 00	$313,000 00
Do.	do	Second do.	776	150,000 00	135,000 00
Lehigh	Allentown	First do.	161	250,000 00	225,000 00
Do.	do	Second do.	373	300,000 00	270,000 00
Do.	do	Allentown do.	1322	500,000 00	450,000 00
Blair	Altoona	First do.	247	150,000 00	135,000 00
Schuylkill	Ashland	do do.	403	175,000 00	157,500 00
Bradford	Athens	do do.	1094	100,000 00	90,000 00
Centre	Bellefonte	do do.	459	100,000 00	87,500 00
Columbia	Berwick	do do.	568	75,000 00	67,500 00
Northampton	Bethlehem	do do.	138	500,000 00	450,000 00
Do.	do	Lehigh Valley do.	2050	300,000 00	270,000 00
Indiana	Blairsville	First do.	867	80,000 00	72,000 00
Columbia	Bloomsburg	do do.	293	50,000 00	44,000 00
Berks	Boyertown	National Bank of Boyertown	2137	50,000 00	44,940 00
Bucks	Bristol	Farmers' National Bank of Bucks County	717	92,220 00	82,990 00
Fayette	Brownsville	First National Bank	135	75,000 00	67,500 00
Do.	do	Monongahela National Bank	648	200,000 00	178,750 00
Allegheny	Buchanan	First National Bank of Birmingham	926	100,000 00	89,000 00
Butler	Butler	First National Bank	309	100,000 00	90,000 00
Luzerne	Carbondale	First National Bank	664	110,000 00	99,000 00
Lehigh	Catasauqua	National Bank of Catasauqua	1411	500,000 00	450,000 00
Franklin	Chambersburg	National Bank of Chambersburg	593	260,000 00	233,500 00
Delaware	Chester	First National Bank	332	100,000 00	90,000 00
Do.	do	Delaware County do.	355	300,000 00	141,500 00
Clarion	Clarion	First do.	774	100,000 00	87,000 00
Clearfield	Clearfield	do do.	768	100,000 00	90,000 00
Do.	do	County do.	855	100,000 00	65,750 00
Chester	Coatesville	National Bank of Chester Valley	575	200,000 00	179,000 00
Lancaster	Columbia	First National Bank	371	150,000 00	132,000 00

NATIONAL BANKS IN PENNSYLVANIA—CONTINUED.

LOCATION.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Lancaster	Columbia	Columbia National Bank	641	$500,000 00	$450,000 00
Crawford	Conneautville	First do	143	100,000 00	89,400 00
Montgomery	Conshohocken	do do	2078	150,000 00	135,000 00
Erie	Corry	do do	605	100,000 00	90,000 00
Do	do	Corry do	569	100,000 00	90,000 00
Clearfield	Curwensville	First do	300	100,000 00	90,000 00
Montour	Danville	do do	325	150,000 00	135,000 00
Do	do	Danville do	1078	200,000 00	180,000 00
Chester	Downingtown	Downingtown do	661	100,000 00	90,000 00
Bucks	Doylestown	Doylestown do	573	105,000 00	94,500 00
Northampton	Easton	First do	1171	400,000 00	359,950 00
Do	do	Easton do	1233	500,000 00	450,000 00
Erie	Erie	First do	12	150,000 00	145,500 00
Do	do	Second do	606	300,000 00	260,000 00
Do	do	Keystone do	535	250,000 00	200,600 00
Do	do	Marine do	870	150,000 00	131,000 00
Venango	Franklin	First do	189	100,000 00	87,500 00
Adams	Gettysburg	do do	311	100,000 00	90,000 00
Do	do	Gettysburg do	611	145,150 00	130,500 00
Erie	Girard	First do	54	100,000 00	90,000 00
York	Glen Rock	do do	435	50,000 00	48,000 00
Franklin	Green Castle	do do	1081	100,000 00	87,500 00
Montgomery	Green Lane	Green Lane do	2131	100,000 00	45,000 00
Westmoreland	Greensburg	Farmers' do	1894	100,000 00	80,000 00
Mercer	Greenville	First National Bank of West Greenville	249	125,000 00	89,500 00
York	Hanover	First National Bank	187	100,000 00	100,000 00
Dauphin	Harrisburg	do do	201	100,000 00	90,000 00
Do	do	Harrisburg do	580	300,000 00	270,000 00
Blair	Hollidaysburg	First do	57	50,000 00	45,000 00
Wayne	Honesdale	Honesdale do	644	300,000 00	270,000 00
Chester	Honeybrook	First do	1676	100,000 00	90,000 00
Huntingdon	Huntingdon	do do	31	150,000 00	135,000 00
Indiana	Indiana	do do	313	200,000 00	180,000 00
Cambria	Johnstown	do do	51	60,000 00	54,000 00

Armstrong	Kittanning	do. ... do.	69	200,000 00	199 500 00
Berks	Kutztown	National Bank of Kutztown	1875	60,000 00	50,000 00
Lancaster	Lancaster	First ... National Bank	333	140,000 00	140,000 00
Do	do	Farmers' ... do	597	450,000 00	405,000 00
Do	do	Lancaster County ... do	683	300,000 00	270,000 00
Montgomery	Lansdale	First ... do	430	100,000 00	89,200 00
Lebanon	Lebanon	do ... do	240	50,000 00	45,000 00
Do	do	Valley ... do	655	100,000 00	87,500 00
Do	do	Lebanon ... do	680	200,000 00	173,800 00
Union	Lewisburg	Lewisburg ... do	745	100,000 00	90,000 00
Do	do	Union ... do	784	100,000 00	63,000 00
Mifflin	Lewistown	Mifflin County ... do	1579	100,000 00	90,000 00
Clinton	Lock Haven	First ... do	507	100,000 00	88,000 00
Do	do	Lock Haven ... do	1273	120,000 00	68,000 00
Schuylkill	Mahanoy City	First ... do	567	80,000 00	54,000 00
Lancaster	Manheim	Manheim ... do	912	100,000 00	90,000 00
Do	Marietta	First ... do	25	100,000 00	99,000 00
Carbon	Mauch Chunk	do ... do	437	400,000 00	350,000 00
Do	do	Second ... do	469	150,000 00	132,350 00
Crawford	Meadville	First ... do	115	150,000 00	90,000 00
Do	do	Merchants' ... do	871	100,000 00	90,000 00
Cumberland	Mechanicsburg	First ... do	380	100,000 00	90,000 00
Do	do	Second ... do	326	50,000 00	49,500 00
Delaware	Media	First ... do	312	100,000 00	90,000 00
Mercer	Mercer	do ... do	392	60,000 00	54,000 00
Dauphin	Middletown	National Bank of Middletown	585	100,000 00	67,500 00
Union	Mifflinburg	First ... National Bank	174	100,000 00	90,000 00
Northumberland	Milton	do ... do	253	85,900 00	76,500 00
Do	do	Milton ... do	711	100,000 00	89,000 00
Schuylkill	Minersville	First ... do	423	100,000 00	87,500 00
Lancaster	Mount Joy	do ... do	667	100,000 00	88,950 00
Do	do	Union National Mount Joy Bank	1516	100,000 00	88,000 00
Westmoreland	Mount Pleasant	First ... National Bank	386	150,000 00	135,000 00
Lycoming	Muncy	do ... do	837	100,000 00	85,950 00
Beaver	New Brighton	National Bank of Beaver County	632	200,000 00	108,000 00
Lawrence	New Castle	First National Bank	562	150,000 00	135,000 00
Do	do	National Bank of Lawrence County	1156	150,000 00	135,000 00
Bucks	Newtown	First ... National Bank	324	100,000 00	88,500 00
Cumberland	Newville	do ... do	60	100,000 00	90,000 00
Montgomery	Norristown	do ... do	272	150,000 00	133,750 00
Do	do	Montgomery ... do	1148	400,000 00	360,000 00
Erie	North-East	First ... do	741	50,000 00	45,000 00
Northumberland	Northumberland	do ... do	566	100,000 00	90,000 00

NATIONAL BANKS IN PENNSYLVANIA—CONTINUED.

LOCATION.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Venango	Oil City	First National Bank	173	$200,000 00	$180,000 00
Chester	Oxford	National Bank of Oxford	728	125,000 00	112,500 00
Philadelphia	Philadelphia	First National Bank	1	1,000,000 00	799,800 00
Do	do	Second do	213	300,000 00	250,000 00
Do	do	Third do	234	300,000 00	263 490 00
Do	do	Sixth do	352	150,000 00	135,000 00
Do	do	Seventh do	413	250,000 00	219,350 00
Do	do	Eighth do	522	275,000 00	245,750 00
Do	do	Farmers' and Mechanics' do	538	2,000,000 00	1,000,000 00
Do	do	Philadelphia do	539	1,500,000 00	1,000,000 00
Do	do	Penn do	540	500,000 00	180,000 00
Do	do	National Bank of Northern Liberties	541	500,000 00	450 000 00
Do	do	Corn Exchange National Bank	542	500,000 00	450,000 00
Do	do	City do	543	400,000 00	360,000 00
Do	do	Kensington do	544	250,000 00	225,000 00
Do	do	National Bank of Germantown	546	200,000 00	178,750 00
Do	do	do Commerce	547	250,000 00	217,250 00
Do	do	Commercial National Bank of Pennsylvania	556	810,000 00	630 000 00
Do	do	Manufacturers' National Bank	557	1,000,000 00	546,120 00
Do	do	Southwark do	560	250,000 00	223,450 00
Do	do	Consolidation do	561	300,000 00	270,000 00
Do	do	Union do	563	500,000 00	346,000 00
Do	do	Tradesmens' do	570	200,000 00	180,000 00
Do	do	Girard do	592	1,000,000 00	600,000 00
Do	do	Bank of North America	602	1,000,000 00	800,000 00
Do	do	Mechanics' National Bank	610	800,000 00	480,250 00
Do	do	Commonwealth National Bank	623	300,000 00	213,300 00
Do	do	Western do	656	400,000 00	216,000 00
Do	do	Central do	723	750,000 00	600,000 00
Do	do	National Bank of the Republic	1647	1,000,000 00	800,000 00
Do	do	do Security Bank	1743	250,000 00	180,000 00
Chester	Phœnixville	do Bank of Phœnixville	674	200,000 00	180,000 00
Do	do	Farmers' and Mechanics' National Bank	1936	150,000 00	135,000 00
Allegheny	Pittsburg	First do	48	500,000 00	270,000 00

Do.	do	Second do	252	300,000 00	270,000 00
Do.	do	Third do	291	500,000 00	356,800 00
Do.	do	Fourth do	432	300,000 00	270,000 00
Do	do	Merchants' and Manufacterers' do	613	800,000 00	640,000 00
Do.	do	Citizens' do	619	800,000 00	450,000 00
Do.	do	Pittsburg National Bank of Commerce	668	500,000 00	450,000 00
Do.	do	Iron City National Bank	675	400,000 00	360,000 00
Do.	do	Tradesmen's do.	678	400,000 00	350,000 00
Do.	do	Farmers' Deposit do.	685	300,000 00	270,000,00
Do	do	Mechanics' do.	700	500,000 00	447,750 00
Do.	do	Union do.	705	250,000 00	218,000 00
Do	do	Allegheny do.	722	500,000 00	437,500 00
Do	do	Peoples' do.	727	1,000,000 00	800,000 00
Do.	do	German do.	757	250,000 00	225,000 00
Do	do	Exchange do.	1057	1,700,000 00	800,000 00
Luzerne	Pittston	First do.	478	500,000 00	450,000 00
Do.	Plymouth	do do.	707	100,000 00	90,000 00
Montgomery	Pottstown	National Bank of Pottstown	608	300,000 00	270,000 00
Schuylkill	Pottsville	Miners' National Bank	649	500,000 00	360,000 00
Do.	do	Government do	1152	500,000 00	45,000 00
Do.	do	Pennsylvania do	1663	100,000 00	90,000 00
Berks	Reading	First do	125	100,000 00	87,000 00
Do	do	National Union Bank	693	200,000 00	135,000 00
Do	do	Farmers' National Bank	696	400,020 00	360 000 00
Montgomery	Schwenksville	National Bank of Schwenksville	2142	50,000 00	45,000 00
Luzerne	Scranton	First National Bank	77	200,000 00	200,000 00
Do	do	Second do	49	300,000,00	290,000 00
Do	do	Third do	1946	200,000 00	90,000 00
Snyder	Selinsgrove	First do	357	100,000 00	90,000 00
Northumberland	Shamokin	Northumberland County do	689	67,000 00	60,300 00
Mercer	Sharon	First do	1685	125,000 00	87,500 00
Cumberland	Shippensburg	do	834	75,000 00	67,500 00
Chester	Spring City	National Bank of Spring City	2018	150,000 00	113,500 00
Lancaster	Strasburg	First National Bank	42	100,000 00	99,000 00
Northumberland	Sunbury	do do	1237	200,000 00	180,000 00
Susquehanna	Susquehanna Depot	do do	1053	100,000 00	90,000 00
Schuylkill	Tamaqua	do do	1219	150,000 00	135,000 00
Crawford	Titusville	Second do	879	300,000 00	266,750 00
Bradford	Towanda	First do	39	125,000 00	111,820 00
Schuylkill	Tremont	do do	797	100,000 00	85,000 00
Wyoming	Tunkhannock	Wyoming do	835	100,000 00	90,000 00
Erie	Union City	First National Bank of Union Mills	110	50,000,00	45,000 00
Fayette	Uniontown	First National Bank	270	100,000 00	90,000 00

NATIONAL BANKS IN PENNSYLVANIA—CONTINUED.

LOCATION.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Fayette	Uniontown	National Bank of Fayette county	681	$100,000 00	$90,000 00
Warren	Warren	First National Bank	520	100,000 00	90,000 00
Washington	Washington	do do	586	150,000 00	135,000 00
Franklin	Waynesboro'	do do	244	75,000 00	67,500 00
Greene	Waynesburg	Farmers' and Drover's do	839	150,000 00	90,000 00
Tioga	Wellsborough	First do	328	100,000 00	90,000 00
Chester	West Chester	do do	148	200,000 00	180,000 00
Do	do	National Bank of Chester county	552	225,000 00	202,500 00
Luzerne	Wilkesbarre	First National Bank	30	375,000 00	337,500 00
Do	do	Second do	104	450,000 00	400,000 00
Do	do	Wyoming do	732	150,000 00	135,000 00
Lycoming	Williamsport	First do	175	284,950 00	255,000 00
Do	do	Lumbermans' do	734	100,000 00	85,000 00
Do	do	Williamsport do	1464	100,000 00	90,000 00
Do	do	West Branch do	1505	100,000 00	90,000 00
Do	do	City do	2139	100,000 00	85,500 00
York	Wrightsville	First do	246	150,000 00	134,430 00
Do	York	do do	197	300,000 00	299,920 00
Do	do	York do	604	500,000 00	448,700 00
Do	do	York County do	694	300,000 00	269,900 00
				53,010,240 00	42,298,260 00

[C.]

DIVIDENDS *and earnings of the national banks in the State of Pennsylvania, and of those in Philadelphia and Pittsburg, with their ratios to capital and surplus fund, semi-annually, from March 1, 1869, to September 1, 1874, as reported to the Comptroller of the Currency.*

	No. of banks.	Capital stock.	Surplus.	Dividends.	Net earnings.	RATIOS.		
						Dividends to capital.	Dividends to capital and surplus	Earnings to capital and surplus.
Pennsylvania, for 6 months ending								
August 31, 1869	146	$23,355,020 00	$4,810,860 00	$1,296,060 00	$1,709,036 00	5.55	4.60	6.07
February 28, 1870	149	23,905,240 00	4,974,496 00	1,331,635 00	1,811,543 00	5.57	4.61	6.27
August 31, 1870	149	23,920,240 00	5,370,668 00	1,334,560 00	1,566,199 00	5.58	4.55	5.35
February 28, 1871	151	24,205,240 00	5,577,481 00	1,293,860 00	1,424,050 00	5.35	4.34	4.78
August 31, 1871	151	24,545,240 00	5,781,467 00	1,284,381 00	1,568,270 00	5.23	4.24	5.17
February 28, 1872	153	25,255,240 00	5,998,420 00	1,353,347 00	1,638,464 00	5.36	4.33	5.24
August 31, 1872	155	26,575,090 00	6,359,964 00	1,332,980 00	1,612,149 00	5.21	4.17	5.05
March 1, 1873	157	27,125,240 00	6,670,671 00	1,360,783 00	1,781,134 00	5.02	4.03	5.27
September 1, 1873	158	26,660,580 00	7,019,439 00	1,384,980 00	1,841,315 00	5.19	4.11	5.47
March 1, 1874	157	26,775,240 00	7,207,493 00	1,276,651 00	1,698,259 00	4.77	3.76	5.00
September 1, 1874	156	26,761,590 00	7,435,885 00	1,365,441 00	1,574,945 00	5.10	3.99	4.61
Philadelphia, for 6 months ending								
August 31, 1869	28	16,092,150 00	6,158,302 00	979,607 00	1,178,241 00	6.09	4.40	5.29
February 28, 1870	29	16,355,150 00	6,197,217 00	978,758 00	1,150,597 00	5.98	4.34	5.10
August 31, 1870	29	16,255,150 00	6,498,576 00	942,058 00	1,062,048 00	5.79	4.14	4.67
February 28, 1871	29	16,255,150 00	6,537,247 00	957,258 00	1,000,230 00	5.90	4.20	4.39
August 31, 1871	30	16,480,150 00	6,704,033 00	942,758 00	1,023,270 00	5.70	4.06	4.41
February 28, 1872	30	16,935,000 00	6,804,709 00	971,750 00	1,088,461 00	5.74	4.09	4.59
August 31, 1872	29	16,735,000 00	6,821,824 00	964,250 00	1,081,428 00	5.76	4.09	4.59
March 1, 1873	29	16,735,000 00	6,916,170 00	975,930 00	1,095,087 00	5.83	4.13	4.63
September 1, 1873	29	16,935,000 00	7,064,979 00	983,250 00	1,127,495 00	5.81	4.09	4.70
March 1, 1874	29	16,935,000 00	7,105,792 00	972,250 00	1,035,211 00	5.74	4.04	4.31

DIVIDENDS AND EARNINGS OF THE NATIONAL BANKS, &C.—*Continued.*

	No. of banks.	Capital stock.	Surplus.	Dividends.	Net earnings.	RATIOS.		
						Dividends to capital.	Dividends to capital and surplus	Earnings to capital and surplus
September 1, 1874	29	$16,935,000 00	$7,189,152 00	$970,500 00	$1,079,687 00	5.73	4.02	4.48
Pittsburg, for 6 months ending								
August 31, 1869	15	8,700,000 00	2,086,777 00	479,500 00	626,066 00	5.51	4.44	5.80
February 28, 1870	15	8,700,000 00	2,171,125 00	447,500 00	561,630 00	5.14	4.12	5.17
August 31, 1870	16	9,000,000 00	2,235,774 00	464,500 00	575,889 00	5.16	4.13	5.13
February 28, 1871	16	9,000,000 00	2,297,158 00	463,500 00	561,177 00	5.15	4.10	4.97
August 31, 1871	16	9,000,000 00	2,415,177 00	482,000 00	552,755 00	5.36	4.22	4.84
February 28, 1872	16	9,000,000 00	2,481,622 00	187,000 00	557,482 00	5.41	4.24	4.86
August 31, 1872	16	9,000,000 00	2,570,277 00	479,000 00	576,970 00	5.32	4.14	4.99
March 1, 1873	16	9,000,000 00	2,595,443 00	498,000 00	512,236 00	5.53	4.30	4.42
September 1, 1873	16	9,000,000 00	2,950,741 00	503,000 00	658,449 00	5.59	4.21	5.51
March 1, 1874	16	9,000,000 00	2,983,604 00	459,000 00	524,024 00	5.10	3.83	4.37
September 1, 1874	16	9,000,000 00	3,055,928 00	489,000 00	605,004 00	5.43	4.06	5.02

RESOURCES AND LIABILITIES OF STATE BANKS.

NAMES.	RESOURCES.		LIABILITIES.	
	Aggregate of resources.	Capital stock actually paid in.	Deposits.	Aggregate of liabilities.
Ashland Savings Bank	$95,975 18	$20,200 00	$69,803 53	$95,975 18
Artisans' Deposit Bank	325,137 22	186,500 00	123,867 64	325,137 22
Ashley Savings Bank	48,951 60	18,885 00	21,058 64	48,951 60
Augusta Bank, Sunbury	33,521 10	24,975 00	3,223 09	33,521 10
Arsenal Bank, Pittsburg	220,488 92	54,440 00	143,661 15	520,488 92
Bank of America	548,612 40	22,565 00	255,587 03	548,612 40
Bank of Brandywine	236,422 25	100,000 00	75,099 49	236 422 25
Bank of Pittsburg	2,201,099 14	1,163,150 00	709,775 18	2,201,099 14
Butler Savings Bank	405,141 70	60,000 00	35,644 17	405,141 70
Braddock's Trust Company	60,718 44	26,911 00	....	60,718 44
Carlisle Deposit Bank	642,391 78	100,000 00	503,585 22	642,391 78
Coopersburg Savings Institution	138,482 20	8,000 00	....	138,482 20
Columbia Dime Savings Bank	115,346 02	30,000 00	31,030 97	115,346 92
City Deposit Bank and Trust Company, Pittsburg	187,237 62	49,975 00	130,339 03	187,237 62
Carbondale Miners' and Mechanics' Savings Bank	174,019 77	25,000 00	130,907 01	174,019 77
Citizens' Bank, Philadelphia	204,053 23	99,750 00	88,358 01	204,053 23
Citizens' and Miners' Trust Company Bank, Scranton	146,493 68	51,450 00	84,859 93	146,493 68
Dauphin Deposit Bank	816,231 56	50,000 00	725,901 79	816,231 56
Dime Savings Institution, Bethlehem	332,640 55	10,000 00	112,954 56	332,640 55
Dime Savings Institution, York	254,964 11	25,000 00	128,290 46	254,964 11
Dollar Savings Bank, Uniontown	270,677 34	25,000 00	226,039 80	270,677 34
Deposit and Savings Bank, Catawissa	101,127 84	50,000 00	41,283 08	101,127 84
Dollar Savings Bank, Waynesburg	49,705 26	25,000 00	4,216 40	49,705 26
Erie Dime Savings and Loan Company	772,014 17	45,000 00	669,507 42	772,014 17
Enterprise Savings Bank, Allegheny	157,757 16	81,800 00	72,810 01	157,757 16
Empire Trust Bank, Allentown	224,810 77	62,000 00	75,408 08	224,810 77
Franklin Savings Fund and Safe Deposit Company	46,733 38	18,936 00	25,653 35	46,733 38
Farmers' Savings Bank, Fogelsville	76,102 19	5,025 00	8,152 82	76,102 19
Farmers' and Mechanics' Bank, Shippensburg	290,691 94	63,700 00	203,428 23	290,691 94
Farmers' Bank, Carlisle	194,377 86	50,000 00	122,334 29	197,377 86
Franklin Savings Bank, Allentown	58,197 82	10,125 00	37,981 31	58,197 82
Farmers' and Mechanics' Bank, East Birmingham	310,654 43	156,200 00	124,214 88	310,654 43
Freehold Bank	1,119,608 55	200,000 00	869,204 65	1,119,608 55

RESOURCES AND LIABILITIES OF STATE BANKS—CONTINUED.

NAMES.	RESOURCES.		LIABILITIES.	
	Aggregate of resources.	Capital stock actually paid in.	Deposits.	Aggregate of liabilities.
Farmers' Bank, Harrisburg	$318,910 19	$76,225 00	$230,603 79	$318,910 19
Franklin Saving Fund Society, Philadelphia	973,277 25	21,260 00	853,332 51	973,277 25
Germania Savings Bank	622,318 85	100,600 00	467,255 92	622,318 85
Girard Savings Bank, Allentown	69,339 33	25,000 00	2,683 00	69,339 33
German Savings Institution, Erie	332,106 52	19,355 00	299,170 92	332,106 52
Hanover Saving Fund Society	579,378 40	50,000 00	50,357 60	579,378 40
Harmony Savings Bank	219,123 90	51,300 00	8,425 00	219,123 90
Humboldt Safe Deposit and Trust Company	272,691 00	19,977 50	210,276 07	272,691 00
Hazleton Savings Bank	149,222 60	31,000 00	97,947 19	149,222 60
Hyde Park Bank	150,626 70	31,819 63	94,027 15	150,626 70
Hamburg Savings Bank	84,150 93	10,000 00	68,692 30	84,150 93
Iron Bank, Philadelphia	65,075 05	50,000 00	7,589 05	65,075 05
Iron and Glass Dollar Savings Bank	219,460 02	100,000 00	104,968 15	219,460 02
Kutztown Savings Bank	37,789 25	6,000 00	21,743 64	37,789 25
Keystone Bank	424,266 60	200,000 00	201,418 66	424,266 60
Lebanon Dime Savings Bank	209,717 31	50,000 00	109,390 67	209,717 31
Littlestown Savings Institution	93,257 27	50,000 00	17,594 81	93,257 27
Lykens Valley Bank	151,809 78	59,800 00	13,596 64	151,809 78
Lycoming County Savings Bank	129,433 36	50,000 00	45,146 26	129,433 36
Masonic Deposit Savings Bank	641,688 37	200,000 00	317,103 57	641,688 37
Millers' and Miners' Bank	124,080 19	25,000 00	8,475 00	124,080 19
Miners' Savings Bank, Wilkesbarre	485,040 29	150,000 00	300,003 35	485,040 29
Miners' Savings Bank, Pittston	304,631 89	30,000 00	225,195 93	304,631 89
Merchants' and Mechanics' Bank, Scranton	593,315 36	250,000 00	243,770 93	593,315 36
Manayunk Bank	316,344 70	50,000 00	202,666 82	316,344 70
Merchants' Bank, Easton	480,084 56	187,605 00	256,520 62	480,084 56
Miners' Trust Company Bank	1,396,003 50	100,000 00	1,282,376 41	1,396,003 50
Miners' Deposit Bank, Lykens	131,067 92	30,000 00	32,298 68	131,067 92
Mountain City Banking Company	249,017 03	58,300 00	160,913 11	249,017 03
Mount Carmel Savings Bank	104,463 94	50,000 00	31,869 86	104,463 94
Miners' Trust and Safe Deposit Company, Shamokin	160,451 37	25,650 00	111,811 19	160,451 37
Monongahela Savings Bank	130,709 96	60,141 00	66,416 70	130,709 96
Miners' Savings Bank, Summit Hill	66,178 57	25,087 50	33,800 50	66,178 57

Myerstown Bank	54,942 78	21,950 00	12,884 33	54,942 78
Newtown Banking Company	175,606 99	100,000 00	40,300 16	175,606 99
Nation's Bank for Savings	118,903 27	54,000 00	61,871 31	118,903 27
North Lebanon Savings Bank	78,036 38	20,000 00	21,479 56	78,036 38
Odd Fellows' Savings Bank	248,186 01	120,000 00	118,309 02	248,186 01
Oxford Banking Company	156,841 46	75,450 00	33,107 22	156,841 46
People's Savings Bank, Pittsburg	949,663 85	300,000 00	581,892 89	949,663 85
People's Bank, Philadelphia	1,472,108 04	100,000 00	1,197,995 76	1,472,108 04
People's Saving Institution, North-East	78,001 67	10,111 25	58,120 99	78,001 67
People's Savings Bank, Pittston	118,006 51	56,250 00	53,869 16	118,006 51
Pittston Trust Company and Savings Bank	113,386 49	50,000 00	57,784 00	113,386 49
Plymouth Savings Bank	75,848 56	25,000 00	38,817 39	75,848 56
People's Bank, Wilkesbarre	192,624 41	125,000 00	49,835 30	192,624 41
Penn Bank, Pittsburg	354,235 34	150,585 00		354,235 34
People's Bank, Carmichaels	87,798 00	59,600 00	26,058 00	87,798 00
Quakertown Savings Bank	269,963 06	10,000 00	16,500 00	269,963 00
Reading Savings Bank	1,367,466 03	50,000 00	1,280,090 26	1,367,466 03
Real Estate Savings Bank, Pittsburg	821,015 71	8,200 00	749,447 14	821,015 71
Real Estate Savings Bank, Harrisburg	64,139 46	12,500 00	47,140 58	64,139 46
Safe Deposit Bank of Pottsville	707,549 81	100,000 00	556,623 69	707,549 81
Stroudsburg Bank	232,542 86	89,855 50	123,020 23	232,542 86
Scranton Savings Bank	420,339 79	50,000 00	309,966 15	420,339 79
Shrewsbury Savings Institution	152,803 74	15,000 00	132,480 43	152,803 74
State Bank, Harrisburg	343,446 70	48,000 00	261,857 25	343,446 70
Scranton Trust Company and Savings Bank	1,156,551 98	99,500 00	925,835 51	1,156,551 98
Saucon Savings Bank	141,400 77	20,000 00	62,397 86	141,400 77
State National Bank, Philadelphia	224,102 95	100,000 00	85,739 34	224,102 95
Shoe and Leather Savings Bank	289,854 33	18,489 00	69,210 94	289,854 33
South Side Savings Bank, East Birmingham	312,928 51	161,566 69	128,466 60	312,928 51
Shackamaxon Bank, Philadelphia	219,415 15	72,150 00	127,224 29	219,415 15
Savings and Deposit Bank, Annville	43,920 63	25,000 00	14,163 67	43,920 63
Savings Bank, Franklin	128,981 76	50,000 00	72,798 24	128,981 76
Spring Garden Deposit and Savings Bank	337,902 78	116,865 00	207,599 43	337,902 78
Twenty-Second Ward Bank, Philadelphia	151,646 72	100,000 00	38,121 77	151,646 72
Tenth Ward Bank, Pittsburg	256,747 12	80,815 62	28,124 79	256,747 12
Tamaqua Banking and Trust Company	163,507 43	59,950 00	83,561 37	163,507 43
Union Banking Company				
United States Bank, Pittsburg	170,650 37	84,950 00	66,489 69	170,650 37
Union Savings Bank of East Pennsylvania	88,503 81	15,000 00	60,219 90	88,503 81
United States Banking Company, Philadelphia	131,604 50	50,950 00	501 51	131,604 50
Union Savings and Deposit Bank, Pittsburg	142,739 23	56,833 35	79,681 93	142,739 23
Western Savings Bank	153,857 85	76,900 00	58,113 33	153,857 85
West Philadelphia Bank	219,736 90	64,100 00	132,879 89	219,736 90

RESOURCES AND LIABILITIES OF STATE BANKS—CONTINUED.

NAMES.	RESOURCES.	LIABILITIES.		
	Aggregate of resources.	Capital stock actually paid in.	Deposits.	Aggregate of liabilities.
Warren Savings Bank	$203,767 07	$12,500 00	$169,481 31	$203,767 07
Wilkesbarre Savings Bank	298,191 49	100,000 00	186,497 00	298,191 49
Wilkesbarre Deposit and Savings Bank	372,204 08	150,000 00	205,827 52	372,204 08
White Haven Saving Bank	54,088 71	6,250 00	43,466 72	54,088 71
Wayne County Savings Bank	282,557 05	50,000 00	192,741 23	282,557 05
Wood's Run Saving Fund	105,316 07	43,168 81	49,773 21	105,316 07
Watsontown Bank	153,853 78	100,000 00	47,638 31	153,853 78
Waynesboro' Bank				
Youghiogheny Bank	129,112 98	50,000 00	27,975 54	129,112 98
	35,732,020 98	8,370,168 85	20,961,261 94	35,732,020 98

THIRTY-EIGHTH SEMI-ANNUAL REPORT OF THE DOLLAR SAVINGS BANK.

124 *Fourth Avenue, Pittsburg, Pa.*

LIABILITIES.

Amount due depositors, June 1, 1874	$3,641,265 95	
Dividends due June 1, 1874	99,465 67	
Contingent fund, June 1, 1874	197,203 86	
Total liabilities		$3,937,935 48

ASSETS.

Loans on bonds and mortgages	$2,830,324 97	
Mortgage interest due	9,780 00	
Bills receivable	4,000 00	
Stock in Pittsburg banks	71,634 04	
U. S. 5-20 bonds, 1868	250,000 00	
U. S. 6 per cent. bonds, 1881	50,000 00	
U. S. 6 per cent. currency bonds	250,000 00	
Pittsburg 7 per cent. water extension bonds	50,000 00	
Real estate	141,452 39	
Bank furniture, safe, &c	12,611 79	
Cash in banks and on hand	268,132 29	
Total assets		$3,937,935 48

Present number of depositors 9,375, averaging $399 01 each.

The undersigned auditing committee respectfully report that they have examined the treasurer's report for the last six months, ending May 31, 1874, and have examined the assets of the bank, consisting of bonds and mortgages, deeds of real estate, certificates of bank stock, bills receivable, U. S. 5-20 bonds, 1868, U. S. 6 per cent. bonds, 1881, U. S. 6 per cent. currency bonds, Pittsburg water extension bonds, and the cash in bank and on hand, and find the same to correspond with the above report.

J. J. GILLESPIE,
JAMES D. KELLY,
H. J LYNCH,
GEO. D. BRUCE,
Auditing Committee.

PITTSBURG, *June* 9, 1874.

The trustees have declared a dividend of three (3) per cent. for the last six months, ending May 31, 1874, free of government tax, and payable forthwith. If not drawn will bear interest from 1st inst.

CHAS. A. COLTON, *Treasurer.*

PITTSBURG, *June* 19, 1874.

RAILROADS.

[No. 1]

Table *of railroads owned, leased or operated by the Pennsylvania railroad, prepared from reports for* 1873.

NAME OF COMPANY.	Length in miles of main line laid.....	Length in miles of main line and branches laid in Pa.	Cost of road and equipment.........	Number of passengers carried........	Number of tons of freight moved.....	Gross earnings......	Expenses...........	Dividends...........
Allegheny Valley..........................	132.	262.50	$12,332,317 30	861,239	1,778,638	$2,628,470 92	$1,844,444 60	......
Bald Eagle Valley.........................	51.19	53.69	1,050,000 00	*	*	*	*	8
Bedford and Bridgeport....................	38.70	50.	1,412,182 60	*	*	*	*	......
Bellefonte and Snow Shoe..................	21.20	21.20	458,181 33	18,323	109,110	229,788 19	62,201 57	†75 c.
Buffalo, Corry and Pittsburg..............	43.20	6.	14,999 65	65,542	109,325	169,989 01	292,486 96	......
Chartiers..................................	22.80	22.80	1,128,690 01	107,209	14,548	61,193 09	42,038 16	......
Cleveland and Pittsburg...................	167.	47.	15,571,299 78	703,829	1,981,538	3,740,384 15	1,815,730 61	7.10
Columbia and Port Deposit.................	5.	.25	1,096,042 47	......	......	......	......	......
Connecting.................................	6.78	6.78	2,278,300 00	......	......	......	......	6
Cumberland Valley.........................	82.20	68.30	1,753,613 46	321,515	393,128	614,184 99	266,739 43	8
Danville, Hazleton and Wilkesbarre........	45.	45.	1,102,600 00	*	*	*	*	......
East Brandywine and Waynesburg............	17.50	17.50	360,351 45	*	*	*	*	......
Ebensburg and Cresson.....................	11.	11.	122,000 00	*	*	*	*	......
Elmira and Williamsport...................	78.	70.	2,620,000 00	115,890	523,286	698,202 53	551,751 50	5.7
Erie and Pittsburg........................	81.50	81.50	4,939,344 52	236,659	1,025,392	1,666,423 50	678,846 63	7
Harrisburg, Portsmouth, Mt. Joy and Lancaster..................	36.	54.	1,882,550 00	*	*	*	*	7
Huntingdon and Broad Top Mountain.........	45.	58.75	4,154,801 27	71,869	617,240	431,107 47	309,239 79	......
Junction..................................	4.62	4.62	898,324 25	275,014	No acc't.	151,133 08	79,020 76	......
Lawrence..................................	17.80	11.10	715,937 88	78,053	337,677	189,361 44	113,088 76	10
Lewisburg, Centre and Spruce Creek........	19.	19.	1,256,545 44	*	*	*	*	......
Mifflin and Centre County.................	12.50	12.50	265,075 89	*	*	*	*	......
New Castle and Beaver Valley..............	14.97	14.97	810,480 54	171,711	647,273	349,978 40	160,284 22	10

Newry	1.10	1.10	22,657,31	....	....	....	....	......
Northern Central	1.38	102.	15,429,883 90	813,561	2,169,217	3,230,722 87	2,299,421 05	......
Oil Creek and Allegheny River	95.	123.	9,623,963 51	445,707	556,546	1,067,733 96	696,441 92	6
Pennsylvania	354.90	437.90	48,279,666 09	5,879,684	9,211,231	24,886,008 90	15,276,307 83	‡10
Pennsylvania and Delaware	41.50	22.50	2,502,000 00	*	*	*	*	......
Philadelphia and Erie	287.60	287.60	23,644,262 00	777,273	2,164,246	3,842,067 20	3,388,255 16	......
Philadelphia and Trenton	26.60	26.60	1,534,478 76	1,747,216	1,400,983	1,995,605 98	1,533,663 24	10
Philadelphia, Wilmington and Baltimore	94.91	17.81	11,814,765 89	2,331,722	500,023	2,992,028 67	1,979,618 63	8
Pittsburg, Cincinnati and St. Louis	193.	35.25	19,682,344 34	638,855	1,447,957	3,836,598 00	3,292,684 96	......
Pittsburg, Ft. Wayne and Chicago	468.30	49.	28,412,353 00	2,107,268	2,316,568	9,605,707 14	6,196,517 08	7
Pittsburg, Virginia and Charleston	30.	30.	1,143,393 57	140,188	4,828	67,137 11	48,581 86	......
Shamokin Valley and Pottsville	28.	28.	1,208,050 00	47,865	45,569	350,487 11	185,701 29	6
South Mountain Iron Company's	17.78	17.78	388,480 63	17,624	56,617	43,819 92	47,216 34	......
Stony Creek	10.30	10.30	455,445 46	....	....	....	....	......
Summit Branch	20.	20.50	988,902 37	19,773	517,228	324,313 73	86,892 76	6
Sunbury and Lewistown	43.50	43.50	1,900,000 00	....	....	....	....	......
Tyrone and Clearfield	40.80	52.50	823,566 98	*	*	*	*	......
Western Pennsylvania	57.10	84.60	3,950,872 11	*	*	*	*	......
	2,901.35	2,328.40	228,028,723 76	17,993,589	27,928,168	62,672,447 36	41,247,175 11	......

*Included in returns of Pennsylvania railroad. †Cash per share. ‡5 per cent. cash, 5 per cent. scrip.

[No. 2.]

TABLE *of railroads owned, leased or operated by the Philadelphia and Reading R. R. Co., prepared from reports for* 1873.

NAME OF COMPANY.	Length in miles of main line laid	Length in miles of main line and branches laid in Pa.	Cost of road and equipment	Number of passengers carried	Number of tons of freight moved	Gross earnings	Expenses	Dividends
Allentown	4.50	4.50	$1,078,438 82	*	*	*	*	......
Catawissa	94.	98.50	6,126,500 00	*	*	*	*	3½
Chester Valley	21.50	21.50	1,371,000 00	*	*	*	*	......
Chestnut Hill	4.12	4.12	120,650 00	*	*	*	*	12
Colebrookdale	12.80	12.80	667,126 78	*	*	*	*	......
East Mahanoy	7.54	11.11	392,550 00	*	*	*	*	6
East Pennsylvania	36.	36.	1,484,290 12	*	*	*	*	6
Little Schuylkill Navigation and coal company	28.25	31.25	1,416,187 80	*	*	*	*	7
Mill Creek and Mine Hill nav. and R. R. co	3.80	3.80	323,375 00	*	*	*	*	10
Mine Hill and Schuylkill Haven	42.50	42.50	3,992,050 00	*	*	*	*	7½
Mount Carbon and Port Carbon	2.50	2.50	282,815 45	*	*	*	*	12
Perkiomen	23.80	23.80	1,388,700 26	*	*	*	*	......
Philadelphia and Reading	98.40	327.	49,319,348 89	6,790,088	11,932,262	14,832,660 68	7,101,070 14	10
Philadelphia, Germantown and Norristown	20.	32.25	1,514,800 01	*	*	*	*	12
Pickering Valley	11.30	11.30	474,551 54	*	*	*	*	......
Plymouth	9.25	9.25	274,495 19	*	*	*	*	......
Reading and Columbia	40.	48.	2,292,999 73	138,771	382,399	310,517 01	213,499 92	......
Schuylkill Valley navigation and railroad co	11.	11.	576,840 94	*	*	*	*	5
	471.26	731.18	73,096,720 53	6,928,859	12,314,661	15,143,177 69	7,314,570 06	......

*Included in the returns of the Philadelphia and Reading railroad.

[No. 3.]

TABLE *of railroads not controlled by the Pennsylvania or Philadelphia and Reading railroad companies*

NAME OF COMPANY	Length in miles of main line laid	Length in miles of main line and branches laid in Pennsylvania	Cost of road and equipment.	No. of passengers carried.	No. of tons of freight moved	Gross earnings	Expenses.	Dividends
Atlantic and Great Western	387.50	92.00	....	975,646	2,712,695	$5,315,489 13	$3,571,061 32	....
Barclay coal company, (leased to Towanda coal company)	16.00	16.00	....	25,347	344,968	31,996 97	113,953 44	6
Berks County	5.50	5.50	....	....	....	....	....	....
Buffalo, Bradford and Pittsburg, (leased to Erie railway company)	26.00	18.00	$2,869,000 00	....	....	....	....	....
Buffalo, New York and Philadelphia	120.55	41.90	5,465,935 84	234,760	158,836	398,362 61	349,716 84	....
Bachman's Valley	9.00	9.00	108,277 89	2,765	....	13,815 50	8,667 66	....
Bell's Gap	8.75	8.75	212,868 66	1,184	20,284	10,914 52	7,499 72	....
Catasauqua and Fogelsville	20.00	25.50	742,156 64	24,000	355,030	130,486 21	90,050 56	6
Chester Creek, (leased to Philadelphia and Baltimore Central)	7.25	7.25	370,000 00	....	....	....	....	6
Cornwall	7.47	8.97	421,492 85	....	201,794	76,839 61	27,423 21	16
Corning, Cowanesque and Antrim	53.00	37.16	1,600,000 00	93,092	1,089,222	428,893 29	319,480 12	3½
Chester Creek and Brandywine	....	....	....	....	....	....	....	....
Cowanesque Valley, (leased to Wellsboro' and Lawrenceville railroad company)	11.00	11.00	318,513 34	....	....	....	....	....
Delaware and Hudson canal	45.00	45.00	4,576,125 73	144,561	2,811,594	125,656 34	958,621 14	....
Delaware, Lackawanna and Western	115.00	195.00	21,221,354 12	223,143	1,448,739	6,248,465 33	2,748,162 46	10
Dillsburg and Mechanicsburg, (leased to Cumberland Valley railroad)	7.50	7.50	170,656 94	....	....	4,936 15	2,213 92	....
Dunkirk, Warren and Pittsburg	....	....	....	13,970	11,932	31,444 45	32,709 16	....
Dunkirk, Allegheny Valley and Pittsburg	96.60	48.30	1,590,000 00	110,000	94,303	195,641 29	175,738 37	....
Erie	159.00	12.50	111,630,092 26	3,922,156	6,312,702	29,012,606 51	13,640,642 32	2¾-7
East Broad Top	11.66	11.66	564,618 73	9,643	3,835	9,209 54	6,683 52	....
Edgewood	....	....	1,163 06	....	....	....	....	....
Fayette County, (leased to Pittsburg and Connellsville railroad company)	12.66	12.66	130,000 00	....	....	....	....	8
Frankford and Holmesburg, (leased to Philadelphia and Trenton railroad company)	4.15	4.15	159,427 07	....	....	....	....	3
Hanover Branch	12.20	12.20	288,351 06	39,854	170,274	106,363 76	65,809 40	10
Harrisburg and Potomac	6.75	36.75	269,250 00	....	....	....	....	....
Homer, Cherrytree and Susquehanna	....	....	13,201 24	....	....	....	....	....
Ironton	11.00	11.00	268,000 00	....	109,178	35,902 24	21,287 95	....
Jamestown and Franklin	51.00	52.50	2,501,697 40	89,870	462,506	....	....	....
Jefferson, (leased to Erie railway company)	47.00	47.00	4,395,700 00	....	....	282,964 15	169,778 67	....
Jersey Shore, Pine Creek and Buffalo	....	....	647,000 00	....	....	....	....	....
Lawrenceville and Evergreen, (narrow gauge)	2.61	2.61	33,181 25	....	....	953 64	1,127 00	....
Lake Shore and Michigan Southern	541.00	11.00	75,949,742 89	2,631,099	5,039,429	19,289,395 84	13,803,872 87	8, 10
Lancaster and Reading Narrow Gauge	....	....	105,733 28	....	....	....	....	....
Lehigh and Lackawanna	15.00	15.00	675,100 00	20,675	44,167	42,386 93	28,710 91	....
Lehigh and Susquehanna	105.00	138.25	12,754,395 17	511,500	3,403,372	1,341,250 17	3,447,816 79	....
Lehigh Valley	101.00	231.77	29,489,162 45	1,096,829	6,898,820	6,710,564 57	3,884,859 97	10
Little Saw Mill Run	3.00	3.00	123,127 04	....	159,657	55,228 13	33,188 98	10
Littlestown	9.70	9.50	115,616 00	13,757	32,732	17,031 76	10,161 62	6

TABLE OF RAILROADS—CONTINUED

NAME OF COMPANY.	Length in miles of main line laid	Length in miles of main line and branches laid in Pennsylvania	Cost of road and equipment.	No. of passengers carried.	No. of tons of freight moved	Gross earnings	Expenses	Dividends
Lykens Valley, (leased to Summit Branch railroad company)	20.00	20.50	$535,767 24					10.1
Ligonier Valley			43,888 93					
Mount Pleasant and Broad Top, (leased to Pittsburg and Connellsville railroad co.)	9.60	9.60	156,613 85					
Mont Alto	10.50	10.50	235,600 00	7.225	13,859	89,099 00	87,903 99	
Muncy Creek	6.00	6.00	150,900 00	8,690	12.374	10,632 86	4,280 93	
Montrose, (narrow gauge)	25.00	25.00	321,100 25	8,923	4.276	10.445 21	4.349 41	
Mount Oliver Inclined Plane	.30	.30	123,162 17	219,083		12.234 62	11,635 35	
Monongahela Inclined Plane	.12	.12	76,442 29	591,159		29,108 62	11,753 78	11
Nesquehoning Valley, (leased to Lehigh coal and navigation company)	16.50	17.59	1.265,684 44					10
North Pennsylvania	55.60	69.70	8,459,576 47	984.723	996,213	1,477,540 08	931,573 90	*5
North-East Pennsylvania	7.30	7.30	228,381 73	40,984	7.927	13.540 47	15,089 46	
New Castle and Franklin	23.50	23.50	551,969 56					
Peach Bottom	8.00	8.00	223.538 16					
Pennsylvania coal	47.00	62.87	2,000,000 00	3,970	1,391,454	28,501 43	413,700 00	20
Pennsylvania and New York canal and railroad company	104.55	125.88	6,142,827 11	191.372	1.328,681	1,485,805 83	1,635,053 91	2½
Pennsylvania Petroleum	5.00	5.00	750,000 00					
Philadelphia and Baltimore Central	46.00	36.75	1,988,850 55	308,498	138,262	303,221 09	221,861 83	
Philadelphia, Newtown and New York	3.00	3.00	440,400 00					
Pit-Hole Valley	7.00	7.00	101,764 67	5,855	7.966	7,695 04	21,713 08	
Pittsburg and Connellsville	145.00	143.90	12,644,274 67	859,533	1,130,331	1,564,993 31	1,556,347 84	
Parker and Karns City, (narrow gauge)	4.00	4.00	147,761 22	867	123	645 26	3,338 04	
Pittsburg and Castle Shannon	6.00	7.41	454,426 83	29,497	126,539	467,666 71	74,410 42	
Pennsylvania Inland	35.00	35.00	3,500 00					
Philadelphia and Chester County			61,577 65					
People's Freight								
Salisbury and Baltimore			89,388 67					
Selinsgrove and North Branch			2,400 00					
Shenango and Allegheny	31.12	31.12	1,178,102 21	26,584	166,380	157,300 51	70,449 17	
Somerset and Mineral Point	9.10	9.10	140,000 00	26,409	7,500	15,617 09	9,380 29	
South Mountain			489,550 00					
South Pennsylvania								
Southern Pennsylvania railway and mining company	21.00	23.00	973,750 00		23,562	31,944 58	23,084 22	
Southwark, (leased to Philadelphia, Wilmington and Baltimore railroad company)	1.72	1.72	58,468 00					6
Sullivan and Erie, (operated by Pennsylvania and New York canal and railroad co.)	24.00	24.00	1,597,718 14			18,044 69	10,249 94	
Susquehanna, Gettysburg and Potomac	17.00	17.00	181,000 00	9,051	18,367	31,079 52	23,372 72	
South-West Pennsylvania, (leased to Pennsylvania railroad company)	24.30	24.30	963,837 00					
State Line and Juniata			33,325 31					
Sherman's Valley								
Spring Brook	5.00	5.00	39,800 00					
Tioga	30.60	30.60	1,354,301 52	167,885	927,476	566,119 43	285,164 16	
Tresckow, (operated by Lehigh and Susquehanna railroad)	659.00	659.00	293,730 47					

Uniontown and West Virginia	....	....	....	....	....	....	....	....
West Chester, (leased to West Chester and Philadelphia railroad company)	9.00	9.00	205,486 79	....	....	....	....	....
West Chester and Philadelphia	26.30	26.30	1,694,932 49	871,398	94,235	362,789 43	$184,429 32	4
West Chester and Phœnixville	....	....	....	....	....	....	....	....
Wheeling, Pittsburg and Baltimore	32.00	18.00	....	52,226	11,521	47,361 79	14,866 31	....
Wilcox and Howard Hill improvement company	....	....	57,520 39	....	....	....	....	....
Wilmington and Reading	63.60	59.87	3,329,089 31	132,055	301,084	....	228,846 16	....
Wilmington and Western	19.92	2.31	796,516 51	39,308	20,030	35,219 24	37,859 55	....
	3,234.78	2,169.03	324,186,604 27	14,619,140	11,643,912	67,542,767 06	18,752,291 10	....

*Scrip.

[No. 4.]

TABLE *of canals, compiled from reports of companies for 1873.*

NAME OF COMPANY.	Length of line and branches.	Cost of canal and fixtures.	Gross amount of tonnage.	Gross earnings.	Expenses.	Dividends.
Delaware and Hudson	108	$6,339,210 49	1,605,959	$75,374 05	$125,927 61	10
Delaware Division, (leased to Lehigh Coal and navigation company	60	2,433,350 00	....	....	....	8
Lehigh coal and navigation	48	3,000,000 00	993,390	580,224 79	127,269 81	......
Monongahela navigation	85	1,151,904 00	....	207,456 55	36,424 41	9
Muncy	¾	6,846 18	....	60 00	68 40	......
Pennsylvania	360	Unknown.	870,121	559,557 28	59,898 58	......
Schuylkill navigation	109	12,903,247 11	1,113,100	789,199 34	93,433 83	3½
Susquehanna	45	4,797,471 27	325,083	87,697 41	19,697 85	......
Union	78	5,907,850 00	119,305	43,348 60	9,143 25	......
West Branch and Susquehanna, (sold to Pennsylvania canal co.)	......	....	....	....	....	......
	893¾	36,539,879 05	5,026,958	2,342,918 02	471,863 74	......

[No. 5.]

TABLE *of Passenger Railways, compiled from reports of companies for* 1873.

NAME OF COMPANY.	Miles of road laid...	Cost of road and equipment	Number of passengers carried........	Gross earnings......	Expenses	Dividends..........
Allentown	3.42	$36,095 74	121,346	$11,625 45	$12,958 40	*10
Citizens', Philadelphia	7.75	220,319 42	4,417,637	300,144 88	204,260 75	†$7 00
Citizens', Pittsburg	5.55	184,333 07	2,881,428	173,958 13	107,751 56	16
Coalville, Luzerne county	2.87	46,091 50	109,409	11,463 46	7,615 39	8
Easton and South Easton	1.36	25,962 50	166,377	9,560 35	7,894 76	....
Empire, Philadelphia	7.75	106,000 00	2,014,662	120,971 20	102,732 14	....
Erie City	2.	36,996 98	316,689	16,395 13	11,839 28	....
Federal Street and Pleasant Valley, Allegheny county	3.	123,171 15	925,990	52,160 14	37,587 83	....
Frankford and Southwark, Philadelphia	16.22	884,113 26	6,084,421	412,324 84	320,849 14	10
Germantown	25.	723,839 30	1,225,383	405,613 75	307,729 98	6
Green and Coates Street, Philadelphia	7.	244,441 56	2,905,989	189,824 95	135,496 21	†$4 00
Harrisburg City	2.	60,249 55	....	5,425 18	6,325 28	....
Hestonville, Mantua and Fairmount	11.	391,786 69	5,266,951	295,548 56	225,965 32	†90
Lombard and South Street	4.51	173,958 98	1,578,000	109,369 47	68,118 67	†$1 25
People's Street, Luzerne county	9.50	142,121 03	418,600	32,841 74	29,304 52	4
People's, Schuylkill county	6.	113,402 10	338,692	23,723 08	18,494 82	....
Philadelphia City	7.	517,735 40	5,692,515	362,109 13	243,415 12	†$5 00
Philadelphia and Darby	5.04	321,058 48	....	....	....	8
Philadelphia and Gray's Ferry	10.36	299,126 68	2,648,477	125,257 06	88,205 28	†$2 50
Pittsburg, Allegheny and Manchester	4.75	170,308 49	2,949,642	157,990 30	112,300 36	10
Pittsburg and Birmingham	3.25	143,514 69	1,310,329	99,630 01	75,597 40	....
Pittsburg, Oakland and East Liberty	2.	125,548 81	340,406	22,196 11	27,911 09	....
Pittsburg and Ormsby	2.21	81,851 13	614,466	33,880 47	47,353 33	....
Ridge Avenue, Philadelphia	13.70	414,834 10	4,100,000	255,077 96	234,006 93	†$1 50
Schuylkill River	3.11	47,463 54	....	....	....	10
Second and Third Street, Philadelphia	36.	787,203 10	8,200,000	544,219 42	374,598 14	10
Seventeenth and Nineteenth Street, Philadelphia	6.75	191,656 85	2,707,401	181,112 15	133,527 67	†$2 00

PASSENGER RAILWAYS, &c.—*Continued.*

NAME OF COMPANY.	Miles of road laid...	Cost of road and equipment	Number of passengers carried........	Gross earnings......	Expenses	Dividends...........
Thirteenth and Fifteenth Street, Philadelphia	9.25	$250,174 58	3,272,563	$175,084 61	$140,420 10	$1 50
Union, Philadelphia	32.	1,032,514 66	10,357,196	682,773 24	444,841 00	†6 00
Union Street, Warren	1.	17,000 00	....	1,565 87	1,700 00	....
West Philadelphia	11.50	595,848 36	8,300,000	462,920 06	332,269 13	16
Wilkesbarre and Kingston	4.12	94,833 37	311,500	24,784 06	13,667 00	8
Williamsport	2.15	41,715 35	277,387	13,869 42	10,192 36	....
	269.12	8,645,270 42	79,854,256	5,313,420 18	3,884,929 96	....

*Stock. †Per share.

[No. 6.]

TABLE *of Telegraph Lines, compiled from reports of companies for* 1873.

NAME OF COMPANY.	Length of main line in miles	Length of line in miles in Pa	Cost of line and equipment	No. messages sent during year in Pa	No. messages received during year in Pa	Gross receipts in Pa.	Gross expenses in Pa.	Dividends
Atlantic and Ohio, (leased to Western Union company)			*$650,000 00					
Automatic	280	50	Unknown.	No record	No record			
American District	32	32	18,631 86		22,599	$6,513 77		
Erie County	73	73	25,000 00	†4,000	†4,000	2,146 27	$1,519 06	
Franklin	752	32	590,000 00	64,550	83,938	22,900 00	21,500 00	
Pacific and Atlantic	4,525	875	2,050,286 26	260,166	222,875	157,000 00	170,000 00	
Philadelphia Local	210	210	400,000 00	240,916	180,700	126,782 47	117,784 29	
Philadelphia, Reading and Pottsville	101	724	166,589 55	151,795	151,795	44,331 08	52,205 82	
Western Union	66,500	4,500	*41,073,400 00	No record	No record	No account.	No account.	
	72,478	6,496	44,973,907 67	721,427	665,907	359,673 59	363,009 17	

*Capital stock paid in—Cost unknown. †Estimated.

EDUCATIONAL.

Statistics *of Churches in the State of Pennsylvania, showing the number of edifices, accommodation and valuation of property held by each denomination.*

NAME.	EDIFICES.			ACCOMMODATION.			PROPERTY.		
	1850.	1860.	1870.	1850.	1860.	1870.	1850.	1860.	1870.
All denominations	3,566	5,337	5,668	1,574,873	2,112,920	2,332,288	$11,586,115	$22,581,479	$52,758,384
Presbyterian	788	997	1,008	364,406	431,763	423,850	$2,602,800	$4,835,760	$12,113,750
Methodist	902	1,573	1,271	342,226	547,782	446,463	1,727,138	3,669,953	7,510,675
Episcopal (Protestant)	136	203	234	67,574	98,917	94,182	1,483,700	2,926,700	6,703,067
Roman Catholic	139	271	319	89,251	152,926	197,115	1,084,204	2,933,440	6,675,050
Lutheran	499	730	841	262,702	290,547	339,128	1,682,656	2,399,637	6,474,022
Reformed Church in U. S., (late Ger. Ref'd,)	209	474	657	105,562	193,482	270,835	648,110	1,831,425	3,746,320
Baptist, (regular)	320	402	371	128,458	149,709	178,210	811,195	1,434,320	3,157,500
Friends	142	141	118	61,274	61,585	43,725	62,287	1,238,750	1,764,700
Evangelical Association	8	....	233	2,300	....	80,545	8,800	....	712,800
Jewish	8	12	14	3,425	3,295	7,750	45,700	154,300	681,000
Christian	22	69	69	7,050	21,960	27,500	24,400	115,240	584,100
Baptist, (not regular)	99	208	218	30,330	70,070	110,100	94,400	258,741	537,800
United Brethren in Christ	14	....	183	4,650	....	60,860	18,600	....	489,300
Moravian, (Unitas Fratrum)	84	23	16	32,715	11,750	9,000	221,350	130,750	401,000
Congregational	18	34	36	5,200	11,081	14,450	31,300	68,850	318,200
Reformed Ch. in America, (late Dutch Ref.,)	10	11	10	6,140	5,750	5,300	96,700	185,250	298,000
Universalist	21	27	18	9,483	11,200	6,725	86,800	136,400	288,500
New Jerusalem, (Swedenborgian)	4	10	7	1,600	3,000	1,950	13,200	71,000	78,000
Unitarian	4	3	4	1,630	1,250	2,050	28,000	26,200	68,800
Miscellaneous	28	....	7	10,697	....	2,500	92,900	....	63,200
Unknown, (Union)	106	144	27	36,650	45,753	7,450	93,375	161,993	51,900
Unknown, (Local Mission)	3	....	4	2,000	....	1,875	26,800	....	28,500
Second Advent	2	4	3	550	900	725	1,700	1,470	11,500
Mormon	....	1	....	....	200	....	....	1,300	....

NEWSPAPER *and Periodical circulation in the United States.*

YEAR.	Newspapers and periodicals.	Copies annually printed.	Population.
1704	1	16,000	600,000
1725	4	170,000	1,000,000
1775	37	1,200,000	2,800,000
1810	359	22,321,700	7,239,814
1828	852	68,117,796	12,000,000
1835	1,258	90,361,000	14,000,000
1840	1,631	995,838,673	17,069,453
1850	2,526	426,409,978	23,191,876
1860	4,051	927,951,548	31,445,080
1870	5,871	1,508,548,250	38,555,753
1874	6,458	1,659,403,075	42,411,328

NUMBER *of publications with their circulation and annual issue in the United States, in* 1870.

	Number.	Copies annually issued.	Circulation.
Daily	574	806,479,570	2,601,547
Three times a week	107	24,196,380	155,105
Semi-weekly	115	25,708,488	247,197
Weekly	4,295	550,921,436	10,594,643
Semi-monthly	96	32,395,680	1,349,820
Monthly	622	67,810,116	5,650,843
Bi-monthly	13	189,900	31,650
Quarterly	49	846,680	211,670
Total	5,871	1,508,548,250	20,842,475

CLASSIFICATION *of publications.*

	Number.	Copies annually issued.	Circulation.
Advertising	79	4,689,800	293,450
Agricultural and horticultural	93	21,541,904	770,752
Benevolent and secret societies	81	6,518,560	257,080
Commercial and financial	142	31,120,600	690,200
Illustrated, literary & miscellaneous,	503	160,061,408	4,422,235
Nationality, devoted to	20	4,671,000	45,150
Political	4,333	1,134,789,082	8,781,220
Religious	407	125,959,496	4,764,358
Sporting	6	3,212,000	73,500
Technical and professional	207	15,974,060	744,530
Total	5,871	1,508,548,250	20,842,475

STATISTICS *of newspapers and periodicals, showing the number of, and circulation of each in the State of Pennsylvania, at the censuses of* 1850, 1860 *and* 1870.

	ALL CLASSES.					
	NUMBER.			CIRCULATION.		
	1850.	1860.	1870.	1850.	1860.	1870.
Copies issued annually	84, 898, 672	116, 094, 480	241, 170, 540			
Daily	24	29	55	162, 635	233, 550	466, 070
Tri-weekly	2	1	3	500	3, 900	10, 000
Semi-weekly	1	3	2	600	9, 800	17, 700
Weekly	261	297	385	526, 142	700, 961	1, 214, 395
Semi-monthly	19		11	290, 500		825, 100
Monthly		28	73		464, 684	846, 750
Bi-monthly			3			8, 550
Quarterly	2	6	8	1, 900	6, 800	31, 200
Annual	1	3		2, 500	13, 000	

STATISTICS *of Libraries in the State of Pennsylvania.*

CLASS AND KINDS.	1850.		1860.		1870.	
	Number.	Volumes.	Number.	Volumes.	Number.	Volumes.
All classes	393	263, 400	1, 416	1, 344, 624	14, 849	6, 377, 845
Not private—total	....	....	....	....	4, 996	3, 049, 247
State	....	....	....	....	1	30, 000
Town, city, &c	....	....	....	....	39	28, 586
Court and law	....	....	....	....	29	24, 051
School, college, &c	51	94, 211	67	172, 802	115	267, 223
Sabbath school	226	58, 071	764	339, 414	3, 916	1, 696, 640
Church	26	26, 452	56	71, 409	732	420, 559
Historical, literary and scientific societies	....	....	....	....	18	202, 600
Benevolent and secret associations	....	....	....	....	30	49, 435
Circulating	....	....	....	....	86	330, 153
Public, not specified	90	184, 666	529	761, 299	....	....

STATISTICS *of school attendance and illiteracy in the State of Pennsylvania, at the censuses of* 1850, 1860 *and* 1870.

STATE OF PENNSYLVANIA.	1850.			1860.			1870.		
	Total.	Native.	Foreign born.	Total.	Native.	Foreign born.	Total.	Native.	Foreign born.
Attending school	504, 610	488, 823	15, 787	669, 961	648, 651	21, 310	725, 005	796, 717	18, 288
Cannot read	....	....	....	....	....	....	131, 728	....	....
Cannot write, persons 10 years of age and upwards	....	....	....	....	....	....	222, 356	126, 803	95, 553
Cannot read and write, persons 20 years of age and upwards	76, 272	51, 283	24, 989	81, 515	44, 930	36, 585	....	....	....

THE MONEY VALUE OF EDUCATION.

In August last I attended the State Convention of teachers at the Shippensburg Normal school, and was deeply interested in two essays read by eminent presidents of our colleges. The questions discussed were, primarily, educational; but their arguments were presented in such a light by incorporated statistics as to render these problems of social science absolute demonstrations.

Dr. Hays, president of Washington Jefferson College, had for his theme the money value of education, and successfully demonstrated that no other investment secured to its possessor so large a percentage upon its investment. The only difficulty seemed to be that if our Pennsylvania fathers acted upon his advice, then the number of lawyers, doctors and divines must very soon overstock the market, and knock down the price nearly 300 per cent., like greenbacks during the late rebellion.

But Dr. Wood's essay, prepared without any knowledge of the former, met this objection by showing that technical education to instruct the mass was indispensably required to raise up artists, designers, engineers, teachers, skilled workmen of every description to take up our ores—our coal—our iron—our raw fabrics of every species, and transmute them into all the various forms, shapes, sizes and colors required in domestic and social life. That by thus greatly increasing the value of their labor our sons and daughters could find profitable employment at home, and would not be driven away to seek employment in new and distant States. The combined productions of these two eminent scholars illustrate what for years has been our dream for our good old mother Commonwealth, that she, in the no distant future, is destined to be the Empire State of our Union, first in all that tends to make her great and glorious. I have therefore copied the whole of Dr. Hays' essay, and a full abstract of the much longer one of Chancellor Woods, and I commend them to the reader's careful consideration.

Dr. Hays spoke as follows:

There are some fields of debate that must be constantly traversed. This question of whether or not an education pays is one of these. The battle was fought out and won many years ago, when the free school system was proposed and finally adopted by our State. But most of the heroes of that war are gone, and a generation has come up since, which knows but little of the arguments *pro* and *con.* This generation, too, is fully as egotistical as any of its predecessors, and is perfectly confident of its own ability to understand and settle all doubtful questions, and has no great faith in the wisdom of the fathers. Moreover, this modern young America having such unbounded faith in its own powers, is very much disposed to believe, that, while an education may have greatly assisted its grandfathers in making their way in the world, yet it is not at all so clear that itself needs any such assistance. It is important, therefore, that the facts and figures should once more be arrayed for the instruction of the public. This being a question of social science, and not exact science, where the forces are so numerous, complicated and subtle, and passion, deceit, prejudice and circumstances so greatly influence actions and results, it will not be often possible to reach precise conclusions. All that can be hoped for reasonably will be that the indications marked in one direction shall be so often and so strongly corroborated by others that we shall have satisfactory if not unmistakable results.

To begin, then, at the beginning: Does it pay to send a boy to school? In the year 1870 there was sent from the Bureau of Education at Washington a circular, asking from employers, workmen and observers information on that very point, and in the published report, entitled "The Relation of Education to Labor," a large number of the replies is given, and the general result of the opinions of these men who employ hands, the hands themselves and thoughtful men, is that ordinary common school education adds from twenty to fifty per cent. to a man's ability to make money. In other words, when a father sends his boy through our common schools, he makes him worth to himself as a man from one-fifth to one-half more than he would have been without it. If in ignorance he could make $1,000 per annum, which would just keep him, this common school education would add from $200 to $500 per year of profits to be saved, either of which sums, if carefully saved each year, is the basis of an early fortune.

The extreme scarcity of good American laboring hands proves the same thing. Not one native boy in one hundred grows up ignorant of reading, writing and arithmetic; but, knowing these, he is worth more than is now paid common hands, and so goes to more profitable work. Farmers complain of the impossibility of getting good farm hands, but he was right who told his neighbor, "If a man was able to work your farm to please you, he would be working his own farm, not yours." Probably every one of us has among our valued acquaintances many who began as farm hands, but are now land owners. The men who stay as hands are the ignorant, and not the educated.

In the same line is the fact that, as a general rule, the wages paid workmen is in proportion to the intelligence demanded by their labor. In manufacturing establishments the men who frequent saloons and the street corners get the low wages, while those who study up the science of their trade or work and read the papers get the high wages.

Go to our almshouses, and we will be met with some very instructive facts. If education has no money value, then the poor houses ought in this respect of education to be an average of the general community in which they are located. The truth, however, is, that these paupers are ignorant, ten to one, while the people are more than one hundred to one educated. Even a common school education, therefore, divides your chances for the poor house by one thousand.

There is a phase of this subject developed in connection with crime that deserves our careful attention. If you go to our jails and work houses where are punished the petty criminals convicted of vices that neither require skill for their commission nor bring profit in their accomplishment, you will find them an ignorant, stolid, stupid set. If you go to the penitentiary where are confined the criminals whose crime pays—forgers, bank robbers and defaulters—you will find many of them highly intelligent and often scholarly in their own specialty. Very many counterfeiters, in the way of skill as workmen, are first class, and if they had turned their ability to making an honest living, might have made a fortune. In addition to those, however, who are caught and punished, we must consider the large class of criminals who are not punished..

Here again we find the same lesson, for we shall probably agree that the ignorant actors in such petty crimes as pilfering and assault and battery are generally caught when they are wanted, but that of the great criminals who steal by the hundred thousand and waylay and murder, there is a very large number that runs unwhipped of justice. Their knowledge helps them to cover up their tracks or foresee the coming discovery and escape in time, or else so cloak it with the forms of law that it cannot be reached. These facts may play havoc with those pet theories that education secures the morality of the community, but we may as well face the truth which we are taught by experience, that mere education does not make a man moral, but it does make him successful and his labor profitable. Facts do show that in the places of punishment and out of them, dextrously avoiding the penalties due to their crimes, the number of criminals who are educated is about a fair proportion of the educated people at large, but even criminal statistics show that a common school education greatly increases the chances of profit.

But it is scarcely necessary to argue this question with regard to these elementary studies, for none not lost to every sense of duty to their children could be willing, where education is free, to allow their children to grow up unable to read in the papers the events of this tumultuous age and write in the times of their joy and trouble to the friends who would sympathize with them and correctly calculate the debts they owe their neighbors and the dues that are coming to them. The debate and doubt in the public mind is not in regard to those branches whose use is direct and obvious, but in relation to those which are very often never directly used, and whose main claim, therefore, to public confidence is their effectiveness in disciplining the mind, so that when it comes to the immediate work before it, it can perform it best and quickest.

We are very often told that an education is not necessary to success, and are pointed to Franklin and Lincoln, Stephenson and Shakespeare, who never went to college, in proof of the assertion. Now, as it may be sup. posed, that the less includes the greater, we propose to devote the remainder of this paper to the money value of a college education. If we show that for the average boy or girl a college education is very greatly to be desired and vastly increases their chances of success, then *a fortiori* every boy and girl who cannot get a college education ought to get just as good an education as they possibly can. If a thorough education is very desirable, then every one ought by all means to get the very best education within their reach. Since, therefore, every college graduate must go through the intermediate steps of the academy and high school, a plea for college education is equally available for every other grade. This is the easier line of argument to adopt for academies, high schools, seminaries and all such institutions, because the statistics are more easily gathered and are already at hand more fully.

The experience of the religious denominations in this respect is very significant. Between these denominations the competition is very active and sharp, and within each denomination the competition between individual ministers is no less active. Not a few denominations have tried the experiment of an uneducated ministry, and some have sought to make it their boast, but it cannot be successfully contradicted to-day that every leading denomination in this country and Europe is an earnest advocate for this education, and that within these denominations the influence of the educated ministers is out of all proportion to their age and natural talents.

This leads us to make some remarks on the basis of comparison. The success of Franklin, Lincoln, Stephenson, Shakespeare, and their like, proves that in every country high positions are open to all fitted to fill them. If, then, a college education does not improve a man's chances for these positions, the number of college graduates found in them ought to be in proportion to the number of college graduates in the country. That is to say, if half the young men of this country go to college, about half the Congressmen, judges, cabinet officers, and such like, should be college-bred. But if more than one-half are college-bred, and not nearly one-half of our young men go to college, it is very evident that the college education greatly benefits a man's prospects for these high positions.

The young men in college have no more natural talents than those out of college. I believe the average is no higher one place than the other. This opinion, however, has been controverted, and I propose to allow one-fourth for stupidity; that is to say, that taking out of those who do not go to college the dumbest of every four the average talents of the other three will be fully as high as the talents of the average college student. Remembering my own companions in my common school days, I am sure that those of us who went to college were no smarter than those who did not, and when I compare the keenness of wit and thought which I have met among the poor and neglected children in cities and country districts with the mental ability and inability which I have met in college during four years as a student, and four more as president, and what I have seen elsewhere of college men, I do not believe that colleges get into their classes anything above the general average.

The question of age ought also to be introduced thus early and remembered. If college-bred men attain eminence at an earlier age than others of equal talents, in this world where life is so short and uncertain, that is a very important item to be considered.

Let us with these two conditions of the estimate in our minds then look at Congress. This would seem to be a very unpromising field, for the impression is abroad that it requires political trickery rather than culture and ability to insure a man's election to Congress. With, however, some very favorable opportunities for forming an opinion on the last few Congresses, I assert my conviction that in point of ability they were such as this nation may be proud of. Corrupt men there were for whose corruption we might blush, but though corrupt they were not weak, and I believe in point of integrity, and certainly as to ability, they were far above what they received credit for. We have fallen into a vicious habit of the detraction of our public men, and I say this to enter my protest against a vast amount of reckless lying done in this way.

What proportion, then, of the United States Congress ought to be educated men? Of course the Congress is open to everybody if he can get votes enough to elect him. By the census of 1870 there were 2,611,796 males between the ages of eighteen and twenty-four. In 1872 the Bureau of Education gave special attention to the collection of college statistics. This being two years after the census, the number in college would naturally be greater, and so taking the two as the basis, the proportion would be unfavorable to education. In that year there were 17,824 in college, and dividing the number between eighteen and twenty-four, the college average age, by this number, we find that about one boy in every 140 goes to college, or that the college men, graduates and those who do not graduate, are about 140th of the male population. Dropping, now, as we have said, one-fourth for stupidity, and we shall have the proportion less than one to one hundred. The proportion ought to be 140th, but out of the 140 take away the 40 stupidest, and surely the remaining hundred will average as good natural talents as those who go to college. The present Congress has 302 members of the House of Representatives and 73 Senators. Therefore there ought, if an education is of no special advantage, to be three college graduates in the House and one in the Senate. There are, however, 138 graduates in the House and 55 who received a less complete education, and 35 graduates in the Senate and 15 who obtained an academical education. That is, a class comprising only one 100th of the population furnishes close upon two-thirds of the Congress. If a denomination could show such a record it would be called a state church, and every unprincipled politician would be for joining it. Note the figures, 193 to 109 and 50 to 23.

From Lanman's Congressional Dictionary I have compiled the following statistics in regard to cabinet officers. I shall hereafter use two terms, college men, meaning all those who took a complete course or a partial course at college or at an academy, and self-educated, meaning those who enjoyed no such advantages so far as known. There have been fifteen different men elected President of the United States; of these thirteen have been college men and two self-educated. There have been nineteen Vice Presidents, of whom twelve have been college men and seven self-educated. Three Vice Presidents have become Presidents, none of whom were college men. Thirty-three have been Secretary of the Navy, of whom sixteen were college men and seventeen were self-educated. This is the only office which I have found in collecting these statistics where the self-educated men had a majority, and here it is but one. Ten men have held the office of Secretary of the Interior, of whom eight were college men and two self-educated There have been thirty Postmasters General, of whom nineteen were college men and eleven self-educated. There have been thirty-four Attorneys General, of whom twenty-one were college men, and thirteen self-educated. Of Secretaries of War there have been thirty-four in all, of whom twenty-seven were college men and but seven self-educated. There have been twenty-nine Secretaries of State, twenty-two of whom were college men and but seven self-educated. When we reach the Secretaryship of the Treasury a fact is developed which surprised me. If there is any cabinet office where mere business life would seem to be on an equal footing with the colleges it would be here, and yet the colleges almost monopolize the place. There have been thirty-three Secretaries of the Treasury, twenty-nine college men, all but one full graduates, and only four self-educated In all there have been 203 persons holding cabinet offices whose history I have been able to ascertain, of whom 142 were college men and 61 self-educated. If an education is of no account there ought to have been two college men out of 204, instead of 142. In other words, a fragment of society certainly less than a hundredth part furnishes more than two-thirds of these cabinet officers. So in the recent Constitutional Convention of this State the majority were college men, for out of 142 who were at some time members of it, 83 were educated and only 49 self-made. Of the signers of the Declaration of Independence, there were in all 56, of whom 41 were educated, or only one less than three-fourth, thirty were full graduates and but fifteen self-made. It is not to be doubted that men may work up to these positions of influence themselves, but if success and fortune are thus so much more surely attained by an education no wise boy will neglect it if he can possibly help it.

Turning now from political life to the legal fraternity, exact statistics are more inaccessible, but so far as observation goes, it points directly to the same thing. There have been eight Chief Justices of the United States, of whom seven were college graduates. There have been thirty-seven associate justices whose history is known, of whom twenty-four or two-thirds were college graduates. In this State the same holds true. Every judge on the bench in Allegheny county is a graduate, as are also most of the judges of the State. If we look among the lawyers we shall find a fact true which will explain this abundance of college graduates on the bench. There are very many lawyers of marked ability who had no college education, but they are generally middle-aged or old men. The men who attain eminence young are the college men. I believe four-fifths of those who attain eminence as lawyers at from thirty to forty-five years of age are college-bred men. Those, as a rule, who attain eminence without this previous mental discipline only reach it at from forty-five to sixty years of age. Now the term of office of the judges is a long one, therefore those elected are generally among the younger men. It seems hardly worth while to elect a man of sixty or seventy years of age to a ten or fifteen years' term of office. Thus it is that the college graduates carry off far more than their proportion of these judgeships. So in the medical profession, there are many physicians who attain eminence without this early education, but they come to it when they are older. The doctors that reach this great success young are generally college graduates. Of course this rule is not without many exceptions, but when it is remembered that not more than one-half of the lawyers and physicians are college educated men, and that so large a proportion of the eminent men of these professions come from that college half, and that a still larger proportion of those who attain eminence early are furnished by that college half, it raises a very strong presumption in favor of it being a paying investment of time and money to take as thorough a course of education as our means will allow.

Probably the fairest as well as the severest test to which this question of the value of an education was ever put occurred during the recent war. Both sides were pushed so close to the wall that neither cared anything about a general so he could succeed in getting victories. The West Point men were matched against the others in all sorts of ways and times and relations as generals of the opposing armies and commanders of corps, divisions, brigades and regiments of infantry, cavalry and artillery on all battle fields. There was no lack of men ready to accept office and responsibility coming from every station in life They were tried with the big battalions on their own side and against them. What now was the result of this test? Before the war was half over the opinion of both North and South was pretty well settled, that he who had been educated for his work was far more than a match for him who with equal native talents lacked that early drill and discipline. When the war ended there was scarcely anything but graduates left prominent on either side. Stonewall Jackson, Longstreet, Beauregard, A. S. Johnston, Joseph E. Johnston and Robert E. Lee, and Hooker, Hancock, Thomas, Meade, M'Clellan, Sheridan, Sherman and Grant were all West Pointers.

To sum up results then we come to these conclusions: That what is known as a common school education adds from 10 to 50 per cent. to a man's money-making power, whether he makes his money honestly or dishonestly. A higher degree of education adds in almost the same proportion. If we look into those professions, such as law and medicine, where a man's brains and learning, and not his money is his capital, this is specially obvious. Every business man's brains is part of his capital, but besides brains a banker, a merchant, a manufacturer, and such like must have money also. It is a matter of no importance to you whether your lawyer or doctor is rich or poor, *so he knows how to manage your case.* Now a college education fits such men to do as good work at thirty or thirty-five as they would probably have done at forty or forty-five without it. In other words, it adds ten years to a man's working life—not ten years of childhood, nor ten years of infirm old age, but ten years of the prime of his life, when his body is ablest to endure fatigue and his brain endures the longest nervous strain, and when the fees are largest. Moreover, no other investment pays so promptly so large a reward. A college education will cost from $1,500 to $2,500. Now if a young man has real force and snap in him, he can put that education into his service as a teacher or some other calling, and get $1,000 to $2,000 salary per annum, that is his education will more than pay for itself in two years. Will any one show us a farm, a railroad, a bank or a factory that can be bought for $1,500 to $2,500, that will pay for itself in two years. My education cost my father less than $1,500, and I have received every year since more than that as a salary. It is almost my entire capital, and I would be called a fool to consider for a moment the suggestion of selling it for 1,000 per cent. profit. Still further, if a young man goes into banking, stocks may go down, and then he breaks up, and merchants are burnt out, and safes robbed, and money panics smash everybody. But no man loses his education by having it sold out under a foreclosure of a mortgage, or burnt up in a fire, or stolen by a robber, or squandered by a reckless partner, or spirited away by a defaulting book-keeper. It is the only kind of a fortune parents can give their children, which their children cannot waste by their extravagance, or be cheated out of by other people's villainy.

It is estimated by the most careful observers of business life, that in the large cities, of every one hundred persons who undertake business on their own account, seventy-five fail, and make their living serving somebody else as book-keepers, clerks or helpers in some way. Ten others make a bare living with many ups and downs. Ten more reach moderate affluence, three or four more considerable wealth, and not more than one in the hundred ever reaches the real large wealth that so tempted his eyes, when as a boy he was in such haste to get into business for himself. But every boy thinks he is the one in his hundred thousand who will turn out a Ben. Franklin, and so neglects the education that makes men of others, and only gets wiser when he is too old to repent to advantage. I once heard a man say that possibly many a boy then in college might have turned out a genius like Franklin if he had been kept at home. But he had forgotten to count up how many there are at college who would have been blockheads at home, and what multitudes there are who are all but ciphers in society, who would have made masters if they had had a good education. College boys are sometimes called proud, but the really vain and proud are those who think themselves so smart they can get along without schooling. The truth is, every boy and girl when they get out in life will find there with them, in the sharpest competition, boys and girls just as bright as they are themselves, and they stand a poor chance when the odds of thorough discipline is all against them. As well might a common hand undertake to fight with an accomplished boxer.

And now parents and boys what say you to these figures? Are you ambitious for the future? If so, you cannot afford to omit education. It is not indispensable to success, but it brings success soonest and surest. Though the college men are less than one-hundredth of the whole they secure two-thirds of the good places. To put it a little clearer, if among a hundred thousand men a hundred good places are to be distributed there will be sixty-six of them go to the thousand college men in the hundred thousand, while for the other ninety-nine thousand there will be only thirty-four places. In one case your chances are one in fifteen, while in the other they are but one in 2,911.

Surely it is wise to make the best preparation we can for a life so very uncertain as ours. The considerations thus far presented have been exclusively those of the lowest and most materialistic kind. But every man owes something to civilization and christianity and general culture. Here education is all but indispensable. Many men have the wealth and opportunity to be very influential for good, but their ignorance and want of all cultivation and refinement make them ridiculous. Education pays in money, but it pays even a larger profit in enlarged manhood, intellectual enjoyment, social influence, the elevation of society, the refinement of the people, and the general home comfort and public prosperity of the community.

INDUSTRIAL EDUCATION INDISPENSABLE TO OUR STATE.

BY CHANCELLOR WOODS.

I address the representatives of the 19,000 educators of our large, rich and influential State, to whom is entrusted the moulding of our 1,200,000 youth.

Not our fertile soil or our many manufactures, in themselves considered, are of so much importance as the brain and brawn of the youth who are to cultivate this soil, and increase and perfect these manufactures, thus giving us the high rank we should attain among our sister States.

However humble our work as teachers may be regarded by those who measure men by their annual income or their display of dress and equipage, measured as every work should be, by the good done, it is second to none.

I do not address legislators, sensitive as an aspen leaf to the popular pulse, or manufacturers, looking eagerly at the profits of the present year, but those who sow for others and the future, who toil not to mine coal, or to make pig metal, but to build up true, intelligent men and women.

I address you on a particular subject, and I desire to do it as earnestly and with such statistics and facts as will impress, you and, through you, others in different parts of our State, with the great importance of the subject, and secure such action as shall advance the good of our youth and the interests of our State. And I propose to do it in a plain, unadorned manner, stating some of the many facts before me which favor education in the theory and practice of the arts and trades of all kinds, "that special education in our calling which should fit and enable each of us to discharge in the best manner the special narrow round of duty, by which each citizen fills his own personal place in social life."

As teachers, our lives are not those of idleness or ease, but of severe, exhausting labor on material as varied in its nature as the different combinations of matter with the multiform elements of mind and heart can make it.

To make an ingenious piece of machinery requires labor and skill; to mould and fashion a soul demands the exercise of the highest powers with which man is endowed. To create is the province of Omnipotence; second only to this is it to develop that which allies man to the Creator. Education is "one of the greatest and noblest designs that can be thought on, and for which this nation perisheth." And yet the puddler, cutting tailor, glass-blower or sheet worker receives greater compensation than the soul-moulder, who fashions for eternity. More is paid for the coverings than for the object covered; for the setting than for the jewel.

Our duty as educators is not simply to instruct in one or a few studies, but to decide on the comparative value of different studies to different students, with different capacities tastes and purposes.

The relative worth of different kinds of knowledge to the student has not been sufficiently regarded. The studies he has pursued may be valuable, and to the extent to which he has pursued them whilst they may be less so than other studies that might be in whole or in part substituted. An immense amount of information bearing on the industrial activities, which should be understood by all, has been passed over, while the less useful has been studied. There has been a tendency to regard the useful as ignoble.

The answer, then, to the question, what should our youth study? has not been intelligently given. The philosopher said they should study that which they will most need when they become men. Wm. Penn, in writing to his wife in relation to the education of his children, said, "Give them learning, but let it be useful learning."

Practical, skillful men in the trades and arts we need. To have them we must educate them They will not grow of themselves. God will not work a wonder to help us, when he has given us wherewith to help ourselves. Especially are such men demanded in *our* State, where there are so many persons engaged in agricultural, mechanical, engineering and mining pursuits. To advocate such an education is to advocate the highest interests of our Commonwealth and its toilers.

The old and rich institutions of England are slow to adapt themselves to the changes in learning. In Cambridge, it is said, a man may yet get the highest honors in mathematics and natural philosophy, and have never seen a crystal, a lens, an air-pump or a thermometer; and at Oxford he may get his first honor in natural science without knowing the Binomial Theorem or the solution of a triangle. Yet in technical education we are far behind England and the continent where are numerous richly endowed institutions fitted to give instruction in practical education. They have consequently acquired great superiority over us in many of the arts and manufactures. We have been too well satisfied with ourselves and our school system, and have not educated our youth in the arts so as to develop, without "trial and error," and without the most lavish waste our abundant natural resources. Our wealth has reached the sum of $30,000,000,000. But we forget that we are in most cases exhausting our virgin soil without seeking to restore it; that we are consuming our vast stores of mineral wealth and recklessly destroying our forests. In the year 1870 this transfer of wealth from surface and from beneath the surface, after deducting the cost of labor and material, was $1,183,410,861, or $\frac{1}{25}$of all our computed wealth. We took our riches from the earth, and, aided by foreign capital to the amount of $1,400,000,000—our supposed entire foreign indebtedness—we erected our edifices, built our ships and railroads, and fancied ourselves more wealthy by this entire amount. We forgot that the change of a dollar from the purse to the hand, where it could be seen and counted, is not an increase of one dollar in our wealth. It was a dollar, and is a dollar still. We forgot that it is labor which creates wealth or enhances values, and, so far as labor was employed in developing our resources, to that amount, and to that amount only, it has added to our wealth. Of this vast natural wealth we must not be too prodigal. We have, it is true, one of the richest countries on the earth; a fertile soil, extensive forests and an abundance of oil, coal, iron, salt, gold, silver, lead, copper, nickel, slate and marble. Much of our soil has already been exhausted through bad agriculture. We are less careful in this than the Chinese, who see that every element taken from the soil is returned to it, so that there shall be no waste. Our woodlands have been so recklessly stripped, noble forests often girdled and left to stand for years to decay, monuments of our wastefulness, that the cry, "Forbear!" is coming up from all parts of our land. Our iron and coal, too, have been used without regard to economy. What we want is to use all our abundant material so economically as to have no waste, and to apply to it so much of skilled labor as will add the most possible to its value. The labor, too, should be applied in this and not in foreign countries. To send our cotton to England and bring it back, paying for it many times what we receive, or to send over our wheat to be converted into labor, is doing what England did from Alfred to Edward the Confessor—selling our skins for a sixpence and buying the tails for a shilling. We have no faith in the opinion, early expressed in our country, that we should confine ourselves to agriculture, and avoid manufactures. This would make us the slaves of foreign countries, simply tributary to their wealth.

An agricultural people can never become wealthy or powerful. What we do want is intelligent, skilled labor to enhance the value of the natural wealth of the country, and send it to the market increased in value one hundred or a thousand fold. How greatly labor increases the value of the material, can be easily illustrated Aniline colors, surpassing in beauty the Tyrian purple, are made from coal tar, until lately a worthless refuse; and the Aniline blue sells for $28 a pound A pound of cotton, costing 12 cents, made into muslin of good design, sells for 80 cents, and into chintz, $4; a pound of the finest cotton, costing 40 cents, made into cotton lace, will bring $1,000; iron ore, costing 75 cents, made into bar iron, will sell for $5; horse shoes, $10 50; table knives, $180; the finest needles, $6,800; shirt buttons, $29,480; watch springs, $200,000; hair springs, $400,000; pallet arbors, $2,577,595. Here labor has, with the aid of machinery, produced the difference between 75 cents and $2,577,595. Any article obtained without labor has no exchangeable value. Rude labor, that which requires no practice or education, brings the lowest price; dexterous labor, which enables a person through practice to perform works or parts of works quickly and nicely, brings a higher price; and skilled labor, combining a knowledge of the principles underlying the operations as well as dexterity in their execution, brings the highest price. Skilled labor creates values, rude labor often destroys them. The last stroke of the skilled sculptor gives value to the statue; one blow of the rude laborer might destroy the work of years. It is by labor that our machine shops and iron furnaces have been more productive of wealth to our State than would be the richest gold mines of the world And if one-half of the 616,000 persons in our State engaged in agriculture, manufactures and mechanical and mining industries should become skilled laborers, there would be an annual addition to our wealth of $184,800,000. If there should be the same change in one-half of the 9,000,000 engaged in the same pursuits in our whole country, it would, at a very low estimate, add $2,700,000,000 annually to the wealth of the nation. We must not overlook the fact that the sum required for necessary food and clothing is the same for all classes of laborers. In England it has been computed that $125 represents the cost of a highly skilled over a skilless workman, and that this cost of a skilled workman is less than one year's purchase of his increased value to the nation.

A single fact will illustrate the value of skilled labor in producing the best machinery. A Pittsburg cotton manufacturing company wanted a new Corliss steam engine to take the place of one they then had. The offer of one for $8,500 was refused. A second offer, for the fuel saved in five years by the use of the new engine, disclosed the fact that the saving would be $200 per month, or $12,000 in five years. The engine was taken at the first offer. The saving from machinery running evenly, avoiding the breaking of threads, was probably equal to the saving of fuel.

Time will not permit us to do more than to allude to the vast losses arising from ignorant and incompetent workmen, engineers, architects, overseers or owners of property. The abandoning on the ocean of the French steamship L'Amerique through the ignorance of the engineer; the building by our own government, at a cost of $11,000,000, of twenty light-draft monitors, not large enough to carry the turrets for which they were intended; the placing of an engine at the cost of nearly $800,000, on one of our government ships, which was abandoned after a single voyage to San Domingo, in which the lives of many illustrious men were endangered; the Pemberton mills disaster, in which of the 750 employees 88 were killed, and many disabled for life; the recent Mill River disaster, costing 150 lives, and $2,000,000; the falling of a floor in a Syracuse church, killing instantly 14, and injuring 100 more; these losses are familiar to all. Large sums and many lives are lost by incompetent railroad engineers and architects. Soils are exhausted, and small crops are gathered, through ignorance of the chemical and mechanical principles involved in agriculture. We are now taking annually nearly $600,000,000 in value from the elements of our soil, and it has been said that we have taken more in value than the entire wealth of the country. Agriculture is fast becoming chemistry, and husbandry, machinery.

When men understand the theory as well as practice of their business, there will be less time and money wasted in futile attempts at inventions directly at variance with well established laws. Inventions, of which we have many, as the 13,000 patents granted last year show, are generally the result of scientific knowledge. We have already placed England under obligations to our inventions to the amount of $1,000,000,000. But the 7,000 rejected applications for patents last year prove, that there has been much misapplied time and ingenuity in this direction. We are almost daily reminded of the folly of the man who, by years of labor, sought to propel a boat by taking water into the bow and ejecting it from the stern. The $20,000 lost in the vain attempt to collect the alcohol from bread in baking, and the efforts to construct electro-magnetic engines in the hope of superseding steam, are examples of the same kind. I have often been compelled to advise young men to abandon useless projects to which they had devoted years of patient toil and all their means. A knowledge of scientific principles would have saved them this loss. Science often comes to the rescue of ignorance, though sometimes at a late hour. The pretended discovery of diamonds in California was exposed by Clarence King, but not until innocent men had been defrauded of hundreds of thousands of dollars. The Nevada fraud was revealed to the public by a young scientist, saving $1,000,000. A graduate of a scientific school, for a fee of $250, showed the iron mines of New York, in which hundreds of thousands of dollars were invested, to be valueless in consequence of containing titanium, thus saving $400,000.

It must be remembered that what was economy fifty years ago, is gross wastefulness now, and what is economy now, will be regarded as reckless prodigality fifty years hence. From the waste of former years fortunes are now made.

Less than forty years ago Dr. Buckland said: "We have during many years witnessed the disgraceful and almost incredible fact that more than 36,000,000 bushels per annum, more than one-third part of the best coals produced by the mines near Newcastle, have been condemned to wanton waste, on a fiery heap perpetually blazing near the mouth of almost every coal pit in that district." All the small coal was disposed of in this manner. Dr. Buckland said the inevitable consequence of this frightful waste would be to exhaust this coal field one-third sooner than it would be exhausted if wisely economized, and to endanger the interests of the inhabitants who depend for existence on machinery kept in action by coal. England to-day realizes the justice of this warning in her perilled manufactures. Carrying coals to Newcastle is no longer an absurdity. In this country it is now wisely proposed to consume all the coal dust.

J. Scott Russell, the builder of the Great Eastern, from his own experience, says: "The community at large are deprived of enormous treasures in mechanical inventions, and enormous progress in scientific arts, by the fact of the general want of education in those who practice them. It may not be known, but it is yet true, that the mechanical power employed in all our manufactures is infinitely more costly than it need be. It is equally true that some skilled men know thoroughly how to produce immense economy in the production and use of mechanical power, but that we dare not put the means into the hands of uneducated masters under whose control they would be applied. I am not speaking of a loss of 5, 10, 20 or 30 per cent.; I say that we know that we are only utilizing one-tenth to one-twentieth of the power we employ and waste, and that an economy of 100, 200, 300 and 400 per cent. is quite within our power, so soon as a better-informed, higher-skilled, more perfectly trained class of men and masters shall arise, who are fitted to be trusted with the use of instruments and tools, at present utterly beyond their comprehension, control or application to use."

And again he says: "I find everywhere throughout the work of the railroads of the continent marks of that method, order, symmetry and absence of waste which arise from plans well thought out, the judicious application of principles, conscientious parsimony and a high feeling of professional responsibility."

Such a practical and theoretical education as I am advocating will save many of the losses arising from ignorance, or a want of habits of thought. Property and life will be preserved, the nation will be enriched, and the fierceness of the struggle between labor and capital will be diminished. What benefits the State benefits her citizens. Better educated and more skilled workmen command higher compensation, and higher compensation will enable the man to procure more comforts and luxuries, and to take a higher position among his fellows.

A person educated in the common branches alone will usually earn twice the sum that an uneducated one will, and then his prospects are good for advancement to the position of overseer or manager, with a salary of many thousands, while the ignorant man has no such chance. A few years since, a director of one of the extensive cotton manufacturing corporations of Lowell, Massachusetts, stated that only 45 out of 1,200 operatives in their mills were unable to write their names, and that the wages of these were 27 per cent. less than the wages of those who could write.

In the same mills were 150 girls who had been teachers. Their wages were 17¾ per cent. above the general average, and 40 per cent. above those who made their mark.

But it cannot fail to have been observed that a mere theoretical knowledge will not secure success in a profession or manufacture. To know that an experiment or operation can be performed, and to perform it, are quite different. We have seen many and grand failures, and large sums lost from this cause. The theory of navigation would not ensure a safe captain on the ocean. Many currents and their rates, many winds and their effects, and many peculiarities of his own ship must be known. Power to think, combined with a thorough practical knowledge of mechanics and the principles of science, will enable one to manage machinery skillfully, economizing labor and increasing its effectiveness. Machinery everywhere is performing the most delicate and the most powerful operations, from the spinning of the slenderest thread to the making of the massive iron plate. It must be directed by intelligence and thought, and the greater the improvement in machinery, the greater the intelligence and skill required to manage it. To-day, with the aid of machinery, one girl spins as much as did 3,000 of the sun-stained Hindoos centuries ago. It has been estimated that, at the present time, the laborers of Europe and the United States, with the aid of machinery, are doing four times the work that the whole population of the globe could do by direct labor.

Machinery in the varied manufactures enables all, of whatever taste or strength, to find remunerative employment, which is essential to the prosperity of a nation. Agriculture calls for only a small part of the laborers, and those of well developed muscles. Already our manufactures are many and varied, amounting annually to $4,000,000,000, double our agricultural products. In our State, the value of our manufactures for 1870 was $711,894,344, and our agricultural products were only $183,946,027. In many articles we already equal or surpass other nations. Of seventy-six classes of articles manufactured in Birmingham, England, the chairman of the

Association of Commerce states that twenty-four are re-placed in the common markets of the world by the United States. Our cut nails, sewing machines, pumps and edge tools are unsurpassed by those of any other nation. We have orders for table glass from Europe; our cotton fabrics are sent over the world; Bigelow's looms for weaving carpets are unrivaled. We have $10,000,000 invested in the ceramic art in a single city, and have in our country every needed variety of clay for the most complete success in this large branch of industry. We are now filling a large order for locomotives for Russia. Our silk manufactures in 1872 reached the sum of $25,000,000, affording remunerative employment to 11,713 men and women, while our importations of this article of luxury have fallen to $24,000,000, a reduction of $10,000,000 in three years. To affect contempt for an American silk, now, is to betray ignorance of its value. We are taking annually from England 150,000 tons of tin at the exorbitant price of $115,200,000, foolishly allowing her a monopoly in this article, while possessing mines in our own country, and yet, to her astonishment, we send back tin ware. By increasing our manufactures, we should stop so large importations of woolen goods as $52,408,921 in 1872, and larger importations of other textiles, books, wares and numerous luxuries for which we pay annually many millions.

These industries should be multiplied, and technical education will tend to this result, by giving us the skilled workmen needed for this work. The almost entire disappearance of the apprenticeship system and the oppressive rules of the trades unions, make this education an imperative necessity. Our manufacturers would gladly listen to the entreaties of fathers and mothers to take their sons as apprentices, but they cannot.

The State must remedy this evil, or suffer our youth to become common laborers under foreign overseers.

England until 1868 neglected this education, and so fell behind the continent, losing her position in the manufacture of many articles. The shawl trade of Leeds was absorbed by continental manufacturers by reason of their technical knowledge; the silk trade was injured by a superior skill in dye and finish on the continent; the designers, dyers and engravers in foreign countries, by possessing a thorough theoretical and practical knowledge of their several trades, produced greater purity and beauty of design, cleaner and brighter colors in the cloths and other fabrics they manufactured, finer patterns and greater lightness; Coventry ribbons were taken from her; foreign workmen were employed as painters and designers, and great deficiencies existed in those branches of knowledge which bear most intimately on the great departments of industry. Alarmed at these discoveries—that she was losing her supremacy in manufactures, that French companies were building locomoties for an English railway, and that iron girders for a building in Glasgow were being constructed in Belgium, she at once established technical schools of a high order in the large cities, with others of a lower grade in the smaller towns. For a single department of the art school in South Kensington, £1,000,000 were expended, and £80,000 annually were given for its support by the State. In Queen's Institute, Belfast, Ireland, from 300 to 400 female students are trained in all branches of skilled labor, for which taste and physical fitness make them suitable.

In Europe these schools are many, and are supported wholly or in part by the State, on a scale, too, worthy the object. In 1869 there were 350 technical schools in Paris. Eleven thousand men receive a technical education annually in Prussia. From 10,000 to 12,000 workmen attend the lectures of the University in Berlin. Creuzot is a wonder of activity, skill and success, from her systematic technical education. From the same cause, Switzerland, cut off from the sea and from mines, with her mountain climate, at every disadvantage, competes with the world in many of her manufactures. In our own country, Cooper Institute, Stevens Institute, the Worcester Free Institute, and the Institute of Technology in Boston, and many colleges and universities, are doing valuable service in this department.

That there should be some change in our course of education, conforming to the increased extent of the sciences and their numerous applications, must be evident. What shall the change be? What reforms shall be introduced in our present studies, and what new studies shall be adopted? Time will permit me to make only a few suggestions in reply to these important questions.

The primary school should give a knowledge of objects, their forms and colors and uses. In doing this, drawing will be found highly useful, and it will prove an agreeable change from studies less interesting. It is, too, the foundation of technical education, and is important to all of every trade and profession. By training the eye to keenness, and the hand to accuracy and rapidity, it will prove a valuable aid to penmanship, orthography and reading, in all of which close observation is necessary. In its higher forms, geometric, model, mechanical and architectural, it should be continued through the higher schools and colleges. It is not mere picture drawing of which I speak, but something higher and more useful. As a result of this study, we shall have better artists, engineers, mechanics, architects and designers. Many articles, such as glass, pottery, cabinet furniture, prints, and other manufactures, may be rendered worthless, or have their values increased many fold, according to their designs. Good designs increase the value of prints from 20 to 30 per cent. So important is this art of designing considered now, that a firm in New York pays a designer in shoes $5,000 a year. By the beauty of his designs a manufacturer of silver ware in Taunton, Massachusetts, drove every other manufacturer out of the market. A single manufacturing company in Massachusetts, stated that their designs cost them $40,000 annually, every dollar of which went to England, France and Germany. This sum should be saved to our own country.

Workmen do not sufficiently understand the importance of drawing. It is said that if this art were understood by every journeyman in a machine shop, the productive efficiency would be increased 33 per cent. By enabling workmen to work from a design instead of expensive models, this art would save a vast amount of time and money. A manager of an important branch of industry at Worcester, Massachusetts, says that, when a lad, he was one of a class of thirteen, who spent all their leisure time in studying drawing. At the present time, every one then in the class has attained an important position, either as manufacturer or manager, and each has owed his power to seize the opportunity of advancement to his knowledge of drawing.

Massachusetts, ever alive to her educational and manufacturing interests, finding that she was far behind Europe in the education of her laborers, and that, as a consequence, her industries were suffering, adopted drawing as one of the studies to be taught in all the public schools of the State, making it obligatory on every city containing over 10,000 inhabitants, to furnish free instruction in this art to all over 15 years of age. An art director was procured from Europe at a salary of $5,000, and generous provisions were, in all respects, made. The result is most gratifying. In 1870 her product in printed cottons was over $17,000,000, and her other manufactures in which design is of the first importance, were probably more. Massachusetts never made a better investment for her sons and daughters, and her manufacturing interests.

It is believed that this study can be introduced into our schools without interfering at all with the present lines of study. Familiar lectures, with illustrations on geometry, elementary physics, elementary chemistry and natural history should be given to all who are to leave school early. The amount of scientific information thus received, though it may be small, will lead the pupils to notice facts and to study principles in science throughout life. As the pupils advance, as far as practicable, models or drawings of machinery, or the machinery itself, and all processes of manufacture should be examined and reports made with drawings explaining them, showing their excellencies or defects, and suggesting remedies. Special schools, or departments in existing schools, should be established where these branches may be thoroughly taught. As soon as it can be done, shops should be erected where certain trades or parts of trades can be learned, where the hand and eye can be trained, and the student prepared for work or the management of works. Those who take a higher course in our schools and universities, should receive thorough instruction in all the sciences which relate to engineering, agriculture, the arts, trades and manufactures. It is my opinion, confirmed by many educators of experience and good judgment, that much of the time—years, it may be, now devoted to a few primary studies, reviewed so often that the process becomes mechanical, may be saved by commencing each study at the proper age and omitting unnecessary portions of the text-books. Occasionally, for a term, the study of arithmetic, geography or grammar, may be wholly omitted for some new and more interesting study relating to science or the arts. The experiments and illustrations will awaken mind, kindle enthusiasm, and many will be induced to prolong their attendance at school, who otherwise would not. By this course far more will be accomplished in a given time than now. It has been found that students who have spent but two hours per day in study, and the remaining hours in labor in which they felt an interest, have often made as much proficiency in their studies as those who have devoted their whole time to study.

Those whose course of study is to be limited to fourteen or sixteen years of age—and these compose by far the larger part of our students—should have a short, practical course, in accordance with such limited time. All, of whatever capacity or purpose, should *not* be compelled to pursue the same routine in the same time. This is the very objection brought so justly against the old collegiate system. Yet while that system in many colleges has been so much changed as to embrace numerous distinct courses suited to the different students, and in addition, in one case, at least, to offer more than forty optional studies, there has not been a corresponding change in most of our grammar and ward schools.

The effects of these practical and theoretical technical schools, wherever established, have been most marked, stimulating the intellect to activity and diminishing the poverty, vice and crime of the community. And when we consider that 82 per cent. of the criminals of our country never learned any trade, never were masters of any skilled labor, and only 6 per cent. are skilled artisans and mechanics, the ethical value of this education becomes exceedingly important. The professions are crowded and manufacturing, and mechanical and agricultural pursuits are less honored than they should be. Our fathers and mothers should feel that a practical technical education is what most of their sons and daughters need. Our youth should be taught that there is true dignity in skilled manual labor, and that it will bring liberal pecuniary returns.

To woman, rapidly rising to her true position, to whom the avenues of trade, the professions, and all kinds of employment are opening, this subject appeals with peculiar force. She should have a deep interest in any measure which will render her less dependent on husband, brother or father, and which will enable her to obtain a generous support when other resources fail. She should seek to be in a condition to feel independent and to be able with ease to earn a livelihood. A knowledge of some art will tend to give her a higher position and to secure for her higher respect. From her knowledge of colors and their relations, and her skill in drawing, woman is fitted to succeed in whatever requires taste. The success of the lady pupils at South Kensington is greater than that of the male students, and that in the face of greater difficulties. The many branches of art-workmanship requiring delicate fingers and native readiness of taste can be better performed by woman than by man. In 1859, 20,000 women were employed in watch making in Switzerland. Our silk manufacturers employ 7,802 women in light, clean, remunerative work. A lady in Pittsburg receives $250 per month for designs in embroidery, made wholly by herself. Woman can excel in draughting, architectural drawing, photography, engraving, modeling, designing and painting. Education in the arts, by opening to her new departments of labor, will enable her better to compete with men, secure for her better compensation for her service, and will increase her usefulness and influence.

For the proper education of all our youth, with the least loss—the education that will best fit them for the duties of life, I plead, I do not, while speaking in behalf of practical learning, forget the moral and religious training without which man will be a failure here and hereafter. The eart is more than the hand or eye—the future more than the present. Ability, power, may be used for evil instead of good, to curse instead of bless. To others I must entrust this subject. I plead for useful learning in the school room or the shop, or both, as a means of interesting our youth, giving them a taste for manual pursuits, so restraining them from idleness and crime, of enabling them to provide better for their own comfort and happiness, so increasing their self-respect and adding to the wealth and moral power of the State.

The effects of technical education in Europe lead us to believe that this system, commenced in the primary school and continued through the different grades, would bring many of the 5,000,000 youth in our country of school age, who attend no school, under instruction, and make them industrious, moral, happy skilled laborers, instead of paupers and criminals.

When plans for education in all its departments, for all, shall be wisely devised and faithfully executed, we shall have better and more productive workmen, better citizens, thinking men and women, multiplied power of machinery economically used, the yield of our soil doubled, a more virtuous people, and our republic more prosperous and more safe. To us this great work is committed. Let us be faithful to our trust.

STATISTICS OF COLLEGES.

NAME.	LOCATION.	Date of foundation,	Total number of graduates	No. of professors and tutors	Whole number of students	Estimated total yearly expenses	No. of volumes in library	Value of apparatus,	Income from invested funds, rents, &c.	Income from tuition
Agricultural College	Centre county	1854	....	10	150	$256	1,500	....	$30,000 00	....
Allegheny College	Meadville	1815	527	6	104	200	11,050	$18,000	11,000 00	....
Dickinson College	Carlisle	1783	1,166	6	87	216	26,878	3,500	14,000 00	$700 50
Franklin and Marshall College	Lancaster	1853	317	7	130	214	13,000	1,500	7,500 00	8,000 00
Girard College	Philadelphia	1848	738	20	550	....	5,000	5,000	266,141 00	....
Haverford College	Haverford	1832	222	5	45	425	8,712	8,200	4,200 00	18,048 17
Lafayette College	Easton	1826	512	26	243	285	8,200	....	....	....
Lebanon Valley College	Annville	1867	15	7	140	200	1,000	....	4,500 00	5,150 00
Lehigh University	Bethlehem	1866	14	14	117	235	2,000	....	....	....
Muhlenberg College	Allentown	1867	61	7	122	250	3,500	900	....	6,300 00
Pennsylvania College	Gettysburg	1832	503	10	150	210	18,600	7,700	6,180 00	6,150 00
Swathmore College	Swathmore	1869	6	22	260	260	1,500	2,000	....	9,000 00
University of Pennsylvania	Philadelphia	1753	....	28	848	....	10,000	60,000	28,698 63	22,485 00
University of Lewisburg	Lewisburg	1847	225	7	150	200	5,200	3,000	8,500 00	5,500 00
Washington and Jefferson College	Washington	1802	2,970	9	134	250	8,000	6,000	12,000 00	....
Waynesburg College	Waynesburg	1850	256	8	285	200	1,200	1,500	3,500 00	1,000 00
Western University	Pittsburg	1819	348	15	189	375	2,600	24,000	15,500 00	11,895 56
Westminster College	N. Wilmington	1852	392	5	193	200	3,000	....	5,000 00	160 00

STATISTICS *of Academies, Seminaries and Female Colleges.*

NAME.	LOCATION.	No. of instructors..	Whole No. of pupils,	Number of males...	Number of females,	Number of volumes in library.........	Value of apparatus,	Cost of tuition per year..............	Cost of board per week............	Value of buildings and grounds......
Allentown Female Seminary	Allentown	8	77	....	....	250	....	$24 00	....	$46,000
Beaver College and Musical Institute	Beaver	7	204	62	142	300	$350	40 00	$3 50	55,000
Blairsville Ladies' Seminary	Blairsville	6	56	....	56	400	300	....	....	15,000
Chambersburg Academy	Chambersburg	5	91	91	....	500	150	40 00	4 50	40,000
Classical Academy	Reading	2	134	134	....	....	600	30 00	3 50	2,500
Cottage Hill Female College	York	6	52	....	52	200	500	40 00	5 00	30,000
Cumberland Valley Institute	Mechanicsburg	3	30	30	....	....	150	30 00	4 25	18,000
Eldersridge Academy	Eldersridge	2	57	38	19	700	50	30 00	3 50	2,000
English and Classical Institute	Stewartstown	4	63	28	35	....	....	30 00	....	....
Greenwood Seminary	Millville	2	120	70	50	....	200	25 00	3 00	6,000
Laird Institute	Murrysville	2	24	13	11	....	300	....	2 50	....
Missionary Institute	Selinsgrove	4	116	100	16	2,500	125	30 00	3 00	10,000
Moravian Seminary	Bethlehem	32	305	....	305	4,500	1,200	40 00	5 00	100,000
Mount Dempsey Academy	Landisburg	1	41	26	15	....	30	20 00	3 00	....
Nazareth Hall	Nazareth	13	155	155	....	5,500	600	....	....	50,000
Pennsylvania Military Academy	Chester	10	130	130	....	1,500	5,000	....	....	100,000
South-Western Normal School	California	6	318	162	156	....	320	21 00	3 75	73,050
Tremont Seminary	Norristown	7	109	109	....	1,000	300	....	....	30,000
University Female Institute	Lewisburg	9	123	....	123	900	4,000	30 00	3 50	60,000
Washington Female Seminary	Washington	8	101	....	101	300	350	38 00	4 00	10,000
Wilson Female College	Chambersburg	11	116	....	116	900	250	60 00	6 00	75,000
Witherspoon Institute	Butler	4	104	69	35	....	400	25 00	3 50	12,000
Wyoming Seminary	Kingston	18	600	400	200	600	3,000	30 00	4 00	200,000

REFORMATORY INSTITUTIONS.

THE CONDITION OF REFORMATORY INSTITUTIONS IN PENNSYLVANIA.

The following sketch was prepared to be used, if occasion offered, at the St. Louis Prison Reform Congress. At a former congress at Baltimore some reflections had been made upon Pennsylvania as not up to the times in regard to modern reformatory institutions. I have inserted a portion of the same, claiming priority for Pennsylvania, and giving a brief sketch of her existing reformatory institutions.

The criminal code of no one of the original colonies was so mild, nor were their reformatory institutions so wisely organized as were those of the colony of Pennsylvania founded by William Penn. The leading principles of this code were embodied in his frame of government prepared in England, and are distinctly contained in the sixty-second section of his great law enacted at old Chester shortly after the landing of the good ship "Welcome" on the shores of the Delaware. This act and the supplementary legislation of 1705 and 1767, all demonstrate that his plan was to make his prisons work-houses wherein the inmates should be employed in some useful industry tending to their own reformation, and making some compensation to that society whose laws they had violated. William Penn has been dead one hundred and fifty-six years, yet could he arise from his grave to take part in the doings of this congress, how few of his published opinions would have to be modified. He has been generally regarded, not as a statesman, but as a religious reformer. This, however, is a mistake. Many others, equally zealous, religious reformers, have labored to elevate our race; but where can you point to the founder of an empire that based his institutions upon so stable a foundation, and was guilty of so few mistakes. Pennsylvania was fortunate in having, if not the ablest, certainly the wisest European that ever crossed the Atlantic to found an empire on these shores. The labors of her founder made Pennsylvania, in criminal jurisprudence, the model colony of the original thirteen. In the earlier days of the Commonwealth Benjamin Franklin devoted his matured energies to the fuller development of the same principles. After his death the venerable Bishop White, aided by a host of worthy co-laborers still further matured the system. The result was a prolonged and earnest discussion in the reviews and encyclopædias of that day, resulting in our State in the act of 1818, authorizing the construction of the Western, and the act of

1821 authorizing the erection of the Eastern Penitentiary. The Western one being the first built was imperfectly constructed for the purposes of enforcing solitary confinement, and although conducted some forty years on that principle, its enforcement has recently been abandoned, and the prisoners are now assembled in a common hall "for labor, learning and religious instruction." The government of this institution is therefore now more than half the time solitary, while confined to their cells, and the remainder of the time congregate, while assembled in discharge of certain duties. The managers maintain these changes have not injured it as a reformatory agency, but have, or will, as soon as all their arrangements are completed, add greatly to the productiveness of its labor. They hope, in this respect, to make it fully equal to the Allegheny work-house—that is to say, self-supporting.

The original construction of the Eastern Penitentiary to enforce separate confinement, was a great improvement upon that of the Western, and its management has labored zealously for nearly fifty years to demonstrate that theirs is the true philosophy for the reformation of criminals. The Philadelphia sentiment outside of that prison, appears to be in full sympathy with its internal arrangements, and I know of no other kindred institution that secures the co-operation of so large, intelligent and zealous colaborers in the work of reforming the prisoners and taking care of them after their discharge. Even the semi-police force to superintend the ticket-of-leave prisoners under the famous Irish system, are scarcely more thorough than the voluntary labor organized for this purpose in Philadelphia. This prison is the only one conducted upon the separate system in this country. It is not probable that any more will be erected upon this system; their construction is costly; cell labor cannot be made remunerative; their solitariness shocks public feeling, and then it appears to run counter to the Divine plan which evidently formed man for social enjoyment. And yet with all these serious drawbacks, the Eastern Penitentiary, even in the estimation of those who believe a better system can be devised, has not been a failure. Its peculiarities, however, have caused its advocates to mingle very little in the general conventions of prison reformers.

Pennsylvania in addition to her two penitentiaries, has some fifteen prisons, combining the county jail and penitentiary—that is to say, they receive convicted criminals sentenced to labor for short terms, leaving only the more hardened criminals sentenced for long terms, to be sent to the penitentiaries.

The most remarkable prison in our State, is the intermediate prison, known as the Allegheny County work-house, now in the third year of its operation. During the first year, imperfectly organized, it only fell a little below being self-supporting; the second year it paid all expenses and net-ted some fifteen thousand dollars profit. This year they hope for still better things; and all this its managers claim has been accomplished without diminishing its efficiency as a reformatory agency. The remarkable success of this institution will revolutionize the construction and management of prisons in our State.

The leading juvenile reformatories of Pennsylvania are the Eastern and Western Houses of Refuge. The former of these will soon be a half century old, the latter not quite half that. The former has three distinct branches, male and female, white, and a colored department. The Western one is to be in the future known as the Pennsylvania Reform School, and will hereafter be conducted upon what is known as the family plan. New buildings in the country, upon a magnificent site, will make this, when fully organized, the model juvenile reformatory in this country. The buildings are in process of erection and when fully completed will cost upwards of $500,000. The advantages of this family plan are very decided, though not enough to change an old established institution merely for the sake of changing the system. But when for any cause an old institution has to be removed and re-built, then a change to the family system should be made. Nearly all the modern juvenile reformatories in Europe are based upon this family system. It has great pliability as to numbers; may be commenced in a small way with fifty inmates, and may, from time to time, be extended to one or two thousand.

We have in our State an institution usually regarded as educational, but which is undoubtedly efficient in absorbing very largely a population that would otherwise crowd our juvenile reformatories. I allude to Girard College for orphan boys. Its inmates when admitted there are fatherless boys, between the ages of six and ten years, and are educated and supported by the munificent bequest of Stephen Girard. The number average about five hundred and sixty, though it is hoped that this number may shortly be doubled. If these boys were not cared for and educated by this trust, their want of parental control would cause many of them to become inmates of our juvenile reformatories.

Pennsylvania has also a large number of homes, orphan asylums and homes of the friendless, largely sustained by the various religious denominations, in which the children of orphanage and want are cared for and educated, thus greatly relieving what would otherwise be our over-crowded juvenile reformatories. The larger number of these are in the vicinity of our large cities and are sustained by one or more wealthy churches, and yet the aggregate number of children in these exceeds those in the juvenile reformatories established by law. This class of institutions, which is chiefly sustained by private contributions, has heretofore had occasional aid from the State Treasury. The new Constitution of our State entirely prohibits appropriations to such in the future under sectarian control. This will cause most of them in the future to rely entirely upon private contribution for their support. During the last ten years our State has expended a large amount of money in the support and education of her soldiers' orphans. These, like the children educated at Girard college, had they not thus been cared for, their want of parental care and control would have caused many of them to find places in her juvenile reformatories. The number cared for, up to the close of the last financial year, was 7,469. The number yet to come in may be two thousand more. The amount heretofore expended is about $4,500,000, and probably $2,500,000 more will be required before these schools are closed. The children leave at the age of sixteen and the schools cannot therefore be closed until about 1879 by act Legislature, session of 1874. Pennsylvania is not alone in this field; she was, however, the first to enter it and has it more fully organized than any other State.

The following is nearly the state of affairs as presented in an account current at this date:

ADULT PRISONS.		
The Eastern Penitentiary	596	
The Western Penitentiary	413	
Allegheny Work-house	435	
The Philadelphia House of Correction	800	
Semi-Penitentiaries, fifteen	450	
		2,694
JUVENILE REFORMATORIES.		
House of Refuge, Philadelphia	566	
Pennsylvania Reform School	256	
Girard College for Orphans	560	
Homes of Friendless, Orphan Asylums, &c	2,500	
		3,882
SOLDIERS' ORPHAN SCHOOLS.		
Soldiers' Orphan Schools		3,167
		9,743

INTERNATIONAL STATISTICAL CONGRESS.

The two following papers were prepared in answer to memoranda addressed to Harrisburg, through our government at Washington: The first by the Department of Justice of the French government, and the second, by the Italian government. The Department of Justice in France had been requested to report upon the usage of governments in regard to the con viction for second, third, fourth, &c., offences. The report asked for by the Italian government was upon our charitable institutions.

These papers, called partly memoranda and partly interrogatories, had been, I presume, carefully drawn up in French and Italian, but had been translated at Washington by some person who did not understand the subjects to which they relate or the technical terms employed. I am confident neither government would have felt honored by the involved language in which they were transmitted. I have not, therefore, copied them with my answers.

COMMONWEALTH OF PENNSYLVANIA,
OFFICE OF BUREAU OF STATISTICS OF LABOR AND AGRICULTURE,
STATE HOUSE, *Harrisburg, April* 30, 1874.

HON. EDWARD YOUNG,
Chief of Bureau of Statistics, Washington:

DEAR SIR:—The Attorney General has such a crowd of business on hand, that he handed me, yesterday, your letter, and insists that I shall answer it.

Our State, Pennsylvania, has been in advance of any other, in the old or new world, in the amelioration of her criminal code. Her great founder, in the sixty-second section of his great law of 1682, declared that prisons should be work-houses, and in the same act inflicted the death penalty for wilful murder alone. Thus Pennsylvania, in her history of one hundred and ninety-two years, has only one crime upon her statute books for which she inflicts capital punishment. Her penal code was revised at least twice during her colonial existence, to wit: 1705 and 1767. As a Commonwealth it has been three times revised, on all which occasions commissions of able jurists had been appointed, and two or three years each was devoted to the subject. The result of these has been the elaborate acts of 22d April, 1794, 23d April, 1829, and 31st March, 1860. Upon no other subject of her legislation has she expended so much care, and in no other branch of her jurisprudence does she stand so pre-eminent. With these preliminary remarks, to enable the department of justice in France to comprehend the bearing of my answer, I proceed to answer the interrogatories propounded. In the absence of the Attorney General, Dimmick, I have submitted these answers to his assistant.

I remain respectfully yours,

THOS. J. BIGHAM,
Chief of Bureau of Statistics.

First.—Pennsylvania authorizes her courts to impose a severer penalty for the second than for a first offence. By the 182d section of act of March 31, 1860, she empowers her courts, when punishment for both first and second offences would be confinement in the penitentiary, to sentence in the latter to double the time imposed for the first offence. The details of the former legislation were different, but the principle the same

Second.—Criminal courts, for misdemeanors, may impose a fine; for more aggravated misdemeanors they may add imprisonment in the county jail and sometimes even to the penitentiary. Felonies are punished by imprisonment in the penitentiary. The former sentence must have been to the penitentiary in order to subject the prisoner to the double punishment for second offence referred to in answer to first interrogatory.

Third.—I understand that any crime for which the prisoner had been sentenced to the penitentiary in a former case could be given in evidence on trial for a second offence, although not technically the same, when a similar punishment might be inflicted. For example, if he had formerly been punished for the crime of arson, on a second trial for highway robbery the former conviction might be given in evidence. Some of our judges have confined this increased punishment to a repetition of the same crime. I however maintain that the words of the statute are broad enough to include similar as well as the same offence; but punishment in both cases must be a penitentiary offence.

Fourth.—A former conviction for misdemeanor, for which a fine had been imposed, could not be given in evidence on a subsequent trial where conviction might be followed by imprisonment in the penitentiary.

Fifth.—The law makes the discretion of the judge trying the case the authority to increase the penalty. Our Supreme Court can alone interfere by writ of error which carries up the record. No trial of the facts is made in the Supreme Court. I find no authority in regard to the number of offences beyond the second.

Sixth.—The law makes no distinction as to length of time that must elapse between first and second; and a conviction in one county of the State could be given in evidence on a second trial in any other county.

Seventh.—The record of previous conviction would have to be given in evidence upon the trial. Parol testimony might be given to indentify the criminal, not to prove the former conviction.

Eighth.—Our penitentiary records are accurately kept and show first, second, third, fourth, fifth, sixth, and seventh convictions. In the same prison its own records are the evidence; when former confinement has been in different prison, unless the prisoner confesses, I cannot answer how it is ascertained.

Ninth.—Our sentences are governed by law alone, the discretion of the judge is between a minimum and maximum. The judge may impose, first, a fine, second, confinement in county jail, third, confinement in penitentiary, and fourth, in capital cases, sentence to death.

Tenth.—Our penitentiary records show in regard to every prisoner his reformation or non-reformation Great attention has been paid to the accuracy of our penitentiary records. The Philadelphia Penitentiary, on the separate system, claims reformation to be its prime object. The Pittsburg Penitentiary, on the congregate system, claims equal efficiency for reformation and that the labor of the prisoners will be much more remunerative. The Allegheny work-house claims to be equal as a reformatory to either of the others, although the prison is entirely self-supporting. The new house of correction, Philadelphia, is similar to the Allegheny, and is expected to be self-supporting.

COMMONWEALTH OF PENNSYLVANIA,
OFFICE OF BUREAU OF STATISTICS OF LABOR AND AGRICULTURE,
STATE HOUSE, *Harrisburg, Sept.* 16, 1874.

HON. EDWARD YOUNG,
Chief of Bureau of Statistics, Washington :

DEAR SIR :—The Secretary of State has referred to my department yours of 24th ult., asking information for the Italian government. The reports of the Board of Charities of Massachusetts and Pennsylvania and half a dozen other States are full of statistics on these subjects. The proceedings of the prison congresses held at Cincinnati, Baltimore and St. Louis and also the World's Convention in London will probably afford all you desire. I send you by express three volumes of reports of our Board of Public Charities my own report on statistics and our common school report. These will be marked on the outside, International Statistical Congress, for use of Italian Charge de Affairs, Washington, D. C.

Your series of memoranda are so involved that I shall try to answer the leading ones without following closely your order.

In regard to your first and second, I reply our laws are very numerous in regard to charities ; not published in any one pamphlet ; I cannot furnish them.

To the third : Our charitable institutions are governed by law—some by general law—others by special charters.

To the fourth : Their civil conditions are alone subject to our laws. These laws do not regulate religious belief.

To the fifth : Each institution generally holds the real estate upon which it is located. Sometimes it owns other real estate from which it derives an income. More frequently its revenue is derived from dividends on stocks or other personal property. Some public charities, such as the support of the poor, are derived from proceeds of public taxes.

To the sixth : If by private charity is meant begging from door to door, then there is much less of that tolerated in this country than in the old world. The general opinion being that money thus spent is unwisely used.

To the seventh: We have no generation of paupers. The individual poor are temporarily relieved.

In regard to the number who received and the amount contributed to charity, I would state generally: Our State has now a population of 3,800,000. Our great founder provided in his great law for the support of the poor on what we call the township system. Thirty-one counties, containing probably one-fifth the population of the State, still adhere to that system. The large counties, containing the other four-fifths, have collected their poor each upon one or more farms where they labor what they are able and are supported for the residue by the county. This I call the almshouse system.

Our townships support 3,500, at an expense of about	$200,000 00
Our fifty-seven almshouses support 22,180, at an expense of about	1,100,000 00
Our school for blind supports 183, at an expense of about	69,955 76
Our school for deaf and dumb supports 227, at an expense of about	52,873 25
Our school for feeble minded supports 180, at an expense of about	18,500 00
Two juvenile reformatories support 970, at an expense of	95,433 00
Two penitentiaries support 1,033, at an expense of	129,949 00
Pupils in public schools 800,000, cost	8,500,000 00

Forty orphan asylums, homes for the friendless, &c., are chiefly supported by private contributions or churches. We have ten hospitals supported by endowments or private contributions. Girard College endowed with $5,000,000 supports 560 pupils. The National Government alone provides support for its soldiers and sailors in war and merchant vessels.

Nearly all the specifications under the letters a, b, c, d and e, are provided for in some one or other of the institutions above referred to. I doubt if any other State of the Union includes a wider range of charitable institutions. Their administration is generally good, combining a prudent economy with a liberal disposition to premit no worthy subject to be uncared for. The details you will find largely stated in the reports which I send you. These embody more statistics than ever can be mastered by your Italian clerks unless they possess the patience of Job.

You also transmitted me a duplicate of your inquiries to answer for the city of Harrisburg. My connection is with the State government and the reports of the Board of Charities include returns of three small institutions of this city

All of which is respectfully submitted.

THOS. J. BIGHAM,

Commissioner.

COUNTY PRISONS.

NAMES OF COUNTIES.	Management. Sheriff or inspector.	When erected.	Cost.	No. of cells.	Articles manufactured.	Annual cost per capita.	County appropriation.
Adams				14			
Allegheny		1868,		50		$89 42½	$9,432 56
Allegheny work-house		1868,	$500,000 00	400	Barrels, bricks, &c.	Income, $43,247 13, leaving cost per capita about $12.	
Armstrong		1871,	100,000 00	24			
Beaver		1856,	54,000 00	28			
Bedford	Matron	1835,		5			1,000 00
Berks	Under keeper	1847–66,	136,580 00	91	Ingrain, rag and venitian carpet weaving, boot and shoe making.	$79 75	33,989 31
Blair		1868,	65,000 00	28			
Bradford	Sheriff's wife	1849,		4		182 50	1,211 50
Bucks		1812,		9			
Butler		1867,	30,000 00	6			
Cambria		1870,	78,000 00	28			
Cameron		1867,	13,000 00	4			
Carbon		1850,	66,700 00	28			
Centre		1867–68,	54,000 00	20		200 00	
Chester	Keeper	1838,	38,182 00	48	Caning, spooling, broom making, weaving carpet & cloth.	125 00	5,300 00
Clarion		1840,		6			
Clearfield		1841,		3			
Clinton		1842,		4			1,600 00
Columbia		1847,	3,400 00	4			
Crawford		1849,		16			
Cumberland			45,000 00	36			
Dauphin		1841,		40			
Delaware	Inspector or keeper,	1851–67,		38	Carpet and cloth weaving, broom and shoe making.	153 30	4,532 75
Elk		1847,	2,700 00	4			
Erie		1869,	50,000 00	36			
Fayette		1854,		16		182 50	
Forest		1868,	8,000 00	6			
Franklin		1818,		8			
Fulton		1851,		4			
Greene		1836,	4,000 00	2			300 00
Huntingdon	Co. commissioners	1826,		2			1,000 00

COUNTY PRISONS—CONTINUED.

NAMES OF COUNTIES.	Management. Sheriff or inspector.	When erected.	Cost.	No. of cells.	Articles manufactured.	Annual cost per capita.	County appropriation.
Indiana		1839,		5		$182 50	$400 00
Jefferson		1856,	$20,000 00	20			
Juniata		1833,		6			
Lancaster	Keepers	1850,		80	Carpet and bagging weaving, segar, net and shoe making.	328 50	27,295 71
Lawrence		1850,	28,000 00	8			
Lebanon		1814-60,		14			
Lehigh	Inspectors	1867,	200,000 00	40	Carpet weaving		
Luzerne	Keepers		250,000 00	72		240 00	3,500 00
Lycoming		1867,	125,000 00	39			
M'Kean		1848,	3,000 00	4			
Mercer	Keeper	1868,	70,000 00	12			
Mifflin	Matron	1856,	23,500 00	20			
Monroe		1837,		8			
Montgomery		1851,		40	Shoe making	165 00	10,600 00
Montour				4			
Northampton		1868,	150,000 00	52			
Northumberland	Keep			6		182 50	
Perry		1826,		6	Boot and shoe making		
Philadelphia	Matron	1831,		506		130 00	152,619 35
Pike		1814,		2			
Potter		1869-70,	33,500 00	8			13,963 51
Schuylkill	Keeper	1851,	125,000 00	38	Shoe making, weaving, preparing yarn for weaving,	135 00	13,963 15
Snyder		1856-57	2,500 00	4		60 00	
Somerset		1852-53.		9			
Sullivan		1850,	2,500 00	4			
Susquehanna		1867,	33,897 13	16			
Tioga	Sheriff	1861,	14,000 00	8		209 00	1,750 00
Union		1854,		7			500 00
Venango	Keeper	1865,	37,000 00	20		150 00	5,566 00
Warren		1864,		15			
Washington		1867,	70,000 00	9			
Wayne		1857,		8			
Westmoreland		1855,		20			
Wyoming		1868,	18,000 00	6			
York		1853,	60,000 00	35			

PENITENTIARIES, *Houses of Refuge, Asylums, &c.*

PENITENTIARIES.	Opened	Acres of ground	Value of real estate	Value of improvements ..	Salaries of officers	Expenses of maintenance.	Whole No. of prisoners.....	Average ......
Eastern	1829,	13	$1,000,000	$716,620 00	$27,000 00	$76,978 00	840	610
Western	1827,	7½	300,000	628,607 42	24,350 00	52,971 00	599	423
Houses of Refuge:—								
Eastern	1826,	....	200,000	523,500 00	18,370 86	70,111 31	1,239	728
Pennsylvania Reform School	1850,	15	250,000	150,000 00	16,500 00	25,321 69	256	242
New location		505	87,500	250,000 00				
Asylums:—								
Blind	1833,	Lots on Race, Sumner and 21st streets.	100,000	200,000 00	12,709 00	66,955 76	183	......
Deaf and Dumb	1821,	Broad & Pine sts., 2 acres.	150,000	125,000 00	18,440 42	52,873 25	227	......
Training School:—								
For Feeble Minded Children, Media	1853,	89	40,000	169,618 00	12,500 00	48,500 00	180	......

MISCELLANEOUS STATISTICS OF HOUSE OF REFUGE AND REFORM SCHOOL.

Exhibiting the whole number admitted from the opening of the Refuge and Reform School until September 30, 1873; also the number discharged, how discharged, and number remaining September 30, 1873.

RECEPTIONS AND DISCHARGES.	HOUSE OF REFUGE—PHILA.					REFORM SCHOOL—PITTSBURG.					RECAPITULATION.				
	WHITE.		COLORED.		Total........	WHITE.		COLORED.		Total........	WHITE.		COLORED.		Total........
	Boys...	Girls...	Boys...	Girls...		Boys...	Girls...	Boys...	Girls...		Boys...	Girls...	Boys...	Girls...	
Committed	6,940	2,320	1,271	615	11,146	1,660	538	111	37	2,406	8,600	2,918	1,382	652	13,552
Returned by master	416	293	126	109	944	81	76	6	6	169	497	369	132	115	1,113
Returned—voluntarily	156	30	67	10	263	46	21	1	2	73	202	54	68	12	336
having absconded from master			24	2	23								21	2	23
having escaped	30	1	2		33						30	1	2		33
Arrested and returned			1		1	49	7	2		58	40	7	3		50
Re-admitted	156	15			171						156	15			171
Total committed and returned	7,698	2,659	1,488	736	12,581	1,836	705	120	45	2,706	9,534	3,364	1,608	781	15,287
Discharged by indenture	3,541	1,298	781	427	6,047	315	197	10	5	527	3,856	1,495	791	432	6,574
Returned to master		1	18	9	28	1				1	1	1	18	9	29
friends	2,461	700	386	159	3,706	210	68	1		279	2,671	768	387	159	3,985
court or magistrates	82	11	1		94	5	3	1		9	87	14	2		103
Discharged	411	300	67	37	815	239	70	29	10	348	650	370	96	47	1,163
as unfit subjects	208	108	56	15	387	85	43	6	1	135	293	151	62	16	522
by examining judges	151	43	5	6	205						151	43	5	6	205
by order of court	72	9	1		82						72	9	1		82
on parole						676	249	40	20	985	676	249	40	20	985
Removed to almshouse	53	52	13	27	145	17	1	2		20	70	53	15	27	165
city farm						8				8	8				8
hospital	4	3	4	1	12	2				2	6	3	4	1	14
prison	4		1	1	6						4		1	1	6
Sent to sea	141				141						141				141
Escaped	135		19		154	69	8			77	204	8	19		231
Died	57	15	38	12	122	34	9	9	3	55	91	24	47	15	177
Transferred to other homes, asylums, &c	8	23	6	3	40						8	23	6	3	49
Total discharged	7.328	2.563	1,396	607	11.984	1,661	648	98	39	2,446	8.989	3,211	1.494	736	14,430
Remaining September 30, 1873	370	96	92	39	597	175	57	22	6	260	545	153	114	45	857

PENITENTIARIES.

STATISTICS FOR THE NINE MONTHS ENDING SEPTEMBER 30, 1873.

The number of convicts in the penitentiaries on January 1, 1873, was 1,084, and the number committed during the nine months ending September 30, 287, making a population of 1,371. During the same period, there were discharged, 362, leaving in the institutions, on September 30, 1873, 1,009 convicts, thus :

	White.		Colored.		Total.
	Males.	Fem.	Males.	Fem.	
On January 1, 1873, there were	942	15	124	3	1,084
Admitted during the nine months	239	3	43	2	287
Population	1,181	18	167	5	1,371
Discharged	317	5	38	2	362
Remaining September 30, 1873	864	13	129	3	1,009

Miscellaneous Statistics, relating to the House of Refuge and Reform School:

	HOUSE OF REFUGE, PHILADELPHIA.			REFORM SCHOOL, PITTSBURG.	Aggregate.
	White department.	Colored department.	Both departme'ts.		
When opened	1828.	1850.	....	1854.	....
Number of acres of land	....	....	11	13	24
Cost of ground	....	....	$18,000 00	$10,000 00	$28,000 00
Cost of buildings	[*]$279,500 00	$94,000 00	373,500 00	150,000 00	523,500 00
Capacity	622	198	820	228	1,048
Value of real estate, including buildings	$698,661 00	$201,339 00	$900,000 00	$300,000 00	$1,200,000 00
Value of personal property	20,220 00	5,780 00	26,000 00	50,000 00	76,000 00
Receipts for 1872, excluding labor	....	....	[†]111,229 02	55,229 61	166,458 63
Receipts from labor of inmates	26,801 57	3,827 76	30,629 33	3,856 25	34,485 58
Expenditures for 1872, excluding salaries	....	....	[‡]115,949 00	46,397 46	162,346 46
Expenditures for salaries and wages	14,160 19	5,416 28	19,576 47	16,302 36	35,888 83
Average number of inmates	442	116	558	242	800
Cost per capita, nett	$86 92	$130 69	$108 80	$172 04	$140 42
Number of volumes in library	1,000	1,500	2,500	1,894	4,394

MISCELLANEOUS STATISTICS—*Continued.*

	HOUSE OF REFUGE, PHILADELPHIA.					REFORM SCHOOL, PITTSBURG.					RECAPITULATION.				
	White.		Colored.		Total	White.		Colo'd.		Total	White.		Colored.		Total
	Male	Female	Male	Female		Male	Female	Male	Female		Male	Female	Male	Female	
Avg. No. of inmates for 1872	366	76	80	36	558	163	56	16	7	242	529	132	96	43	800
Average age of those received	14	14.8	12.8	14.3	14.2	12.9	14.9	12.3	12.5	13.9	13.4	14.8	12.5	13.3	13.9
Age of the eldest	19	19.8	19.5	16	18.5	18	19	14	14	16.2	18.5	19.3	16.7	15	17.3
Age of the youngest	8.3	10.6	7	9	8.7	8	12	11	11	10.5	8.1	11.2	9	10	9.6
Largest No. in Instit'n in 1872	381	83	90	39	593	170	59	17	9	255	551	142	107	48	848
Smallest No. in instit'n in 1872	358	67	69	31	525	157	53	15	5	230	515	120	84	36	755
No. of volumes in library	830	170	1,040	460	2,500	1,322	393	130	49	1,894	2,152	563	1,170	509	4,394
Time in institution of those discharged, months	16.2	22	27	28	23.3	21.4	14.6	23.6	....	17.5	18.8	18.3	25.3	14	20.4

School Statistics, exhibiting the number of each sex in attendance at the beginning of the year; during the year; number discharged from the schools; number remaining on the roll:

	HOUSE OF REFUGE, PHILADELPHIA.					REF. SCHOOL, PITTSBURG.			RECAPITULATION.		
	White.		Colored.		Total	Boys	Girls	Total	Boys	Girls	Total
	Boys	Girls	Boys	Girls							
Number in attendance at last report	335	66	81	38	520	173	57	230	589	161	750
Admitted to school during the year	222	52	48	31	353	88	36	124	358	119	477
School population for the year	557	118	129	69	873	261	93	354	947	280	1,227
Discharged from school in the year	195	41	42	32	310	71	27	98	308	100	408
In attendance at close of year	362	77	87	37	563	190	66	256	639	180	819

[*] Including furniture.
[†] Including a loan of $35,600.
[‡] Including $9,058 03.

CRIMINAL COURTS.

TABULAR STATEMENT

Of the Sessions of Criminal Courts in Pennsylvania.

[The sittings of all the courts (except in Sullivan county) commence on Monday, and the figures in the columns of months indicate the 1st, 2d, 3d or 4th Monday of the month in which the sittings commence.]

COUNTIES AND COURTS.	January	February	March	April	May	June	July	August	September.	October	November.	December.
Adams	4			3				3			4	
Allegheny			1			1			1			1
Armstrong			1			1			1			1
Beaver			3			2			1		2	
Bedford		1		4				4			2	
Berks	1			3				1			1	
Blair	4			4			4			4		
Bradford		1			1				1			1
Bucks		1		4					2			1
Butler	2		2			3				3		
Cambria			1			1			1			1
Cameron	3			3				2			2	
Carbon	3		4			3				3		
Centre	4			4				4			4	
Chester	4			4				2		3		
Clarion	4			4				4			4	
Clearfield	2		3			1			4			
Clinton		2			2				2			2
Columbia		1			1				1			1
Crawford	2			2				2			2	
Cumberland	2			2				4			2	
Dauphin	3			4				4			3	
Delaware		4			4			4			4	
Elk	2			2				1			1	
Erie		3			1				4		3	
Fayette			1			1			1			1
Forest		4			4				4			4
Franklin	3			2				2		4		
Fulton	2			1				1		3		
Greene				2		2			4			3
Huntingdon	2			2				2			2	
Indiana				1		2			3			3
Jefferson		2			2				2			2
Juniata		1		4					1			1
Lancaster	3			3				3			3	
Lawrence		2			1				2			3
Lebanon	1			3				3			1	
Lehigh	1			1		1			3	4		
Luzerne	1			1					1		1	
Lycoming	4			4				4			4	
M'Kean		4				3			4			3
Mercer		3			3				3			3
Mifflin	2			2				4			4	
Monroe		4			4				4			4
Montgomery		4			3			3			2	
Montour		3			3				3			3
Northampton	3			4				3			3	
Northumberland	1		2					1			1	
Perry	1				1			1		4		
Philadelphia	1	1	1	1	1	1	1	1	1	1	1	1
Pike		3			3				3			3
Potter		3				2			3			2
Schuylkill			1			1			1			1
Snyder		4			4				4			2
Somerset		3			1				2		4	
Sullivan		*4			*4				*4			*3
Susquehanna	2			2				2			2	
Tioga	4				4			4			4	
Union		3			3				3			3
Venango	4			4				4			4	
Warren			1			1			1			1
Washington		3			3			3				2
Wayne		1			1				1			1
Westmoreland		1			2			3			1	
Wyoming	3			3				3			3	
York	1			4				4			1	

*Tuesday.

ABSTRACT OF REPORTS BY PROTHONOTARIES OR CLERKS OF CRIMINAL COURTS.

Statement of the criminal business of the courts in the several counties of the Commonwealth, showing the number of persons charged with crime, number of bills laid before the several grand juries, number of bills returned true bills, number ignored, number of presentments made; also number of bills tried, number of acquittals and convictions, number of nolle prosequies entered, number who plead guilty to indictment, the number and amount of recognizances forfeited.

COUNTIES AND COURTS.	TERMS OF THE COURTS OF WHICH RETURNS HAVE BEEN RECEIVED.	Number of persons char'd with crime	GRAND JURY.				COURT PROCEEDINGS.					RECOGNIZAN'S FORFEITED.	
			Tot. bills laid before grand jury	No. returned as true bills,	No. returned ignored	Number present's made	No. of bills tried	Number of acquittals,	No. of convictions	No. of nolle prosequies,	Numb. plead guilty to indictment	Number	Amount
Adams	Nov., Jan., April, August	79	64	44	20	45	23	10	13	22	3	......	......
Allegheny	Dec., March, June, Sept	1,725	1,491	1,076	377	1	441	299	287	230	249	......	......
Armstrong	Dec., March, June, Sept	165	146	90	55	15	54	13	45	5	1	2	$500
Beaver	Nov., March, June, Sept	89	78	52	26	......	20	14	4	7	17	2	550
Bedford	Nov., Feb., April, August	64	25	21	3	19	13	6	6	16	2	5	1,500
Berks	Nov., Jan., April, August	266	154	138	43	72	51	26	27	5	35	86	43,925
Blair	Oct., Jan., April, July	118	118	93	26	......	35	7	29	19	20	8	3,000
Bradford	Dec., Feb., May, Sept	171	93	59	40	......	24	17	26	35	11	4	1,500
Bucks	Dec., Feb., April, Sept	209	143	98	49	1	68	28	43	34	13	23	4,750
Butler	Oct., Jan., March, June	262	150	99	51	2	9	11	17	22	13	4	1,000
Cambria	Dec., March, June, Sept	57	55	48	5	12	28	15	16	2	6	......	......
Cameron	Nov., Jan., April, Aug	14	12	5	7	4	3	1	2	3	1	......	......
Carbon	Oct., Jan., March, June	79	43	45	11	7	15	9	16	2	5	10	3,000
Centre	Nov., Jan., April, Aug	125	117	71	21	1	23	6	15	31	16	10	3,800
Chester	Oct., Jan., April, August	156	225	164	56	25	148	54	78	1	11	28	5,600
Clarion	Nov., Jan., April, August	153	129	116	14	91	22	8	15	5	12	5	......
Clearfield	Jan., March, June, Sept	237	92	68	23	2	25	4	39	43	17	33	9,500
Clinton	Dec., Feb., May, Sept	160	127	75	52	91	26	13	19	7	18	......	......
Columbia	Dec., Feb., May, Sept	49	31	20	7	5	12	4	10	4	1	2	1,800
Crawford	Nov., Jan., April, August	185	172	125	47	......	67	26	41	6	8	......	......
Cumberland	Nov., Jan., April, August	159	143	111	33	22	48	18	37	10	14	2	400
Dauphin	Nov., Jan., April, August	471	276	172	104	41	101	19	86	3	25	27	1,300
Delaware	Nov., Feb., May, August	96	95	55	38	88	46	19	27	9	4	......	......
Elk	Nov., Jan., April, August	45	23	22	5	12	8	7	3	12	4	7	1,350

STATEMENT OF THE CRIMINAL BUSINESS OF THE COURTS OF THE COMMONWEALTH—*Continued.*

COUNTIES AND COURTS.	TERMS OF THE COURTS OF WHICH RETURNS HAVE BEEN RECEIVED.	No. of persons charged with crime	GRAND JURY.				COURT PROCEEDINGS.					RECOGNIZANCES FORFEITED.	
			Total bills laid before grand jury,	No. returned as true bills	No. returned ignored	No. presentments made	No. of bills tried.	No. of acquittals.	No. of convictions	Number of nolle prosequies	No. plead guilty to indictment	Number	Amount
Erie	Nov., Feb., May, Sept	343	244	205	39	1	83	67	35	79	68	37	$9,650
Fayette	Dec., March, June, Sept.	319	277	158	121	......	70	20	49	36	5	2	400
Forest	Dec., Feb., May, Sept.	4	4	2	2	2	1	1	......	......	......	2	......
Franklin	Oct., Jan., April, August	297	165	103	62	15	59	25	33	70	10	4	600
Fulton	Oct., Jan., April, August	53	24	22	3	......	14	5	8	12	5	2	600
Greene	Dec., April, June, Sept.	71	56	32	23	13	7	1	5	3	3	......	......
Huntingdon	Nov., Jan., April, August	97	61	46	9	19	22	11	12	21	10	4	1,500
Indiana	Dec., April, June, Sept	141	50	33	17	1	16	24	5	17	2	......	......
Jefferson	Dec., Feb., May, Sept.	108	57	42	16	13	24	12	12	36	9	1	200
Juniata	Dec., Feb., April, Sept	36	49	29	19	......	9	3	13	......	4	1	400
Lancaster	Nov., Jan., April, August	431	391	276	115	125	140	85	40	2	40	6	1,650
Lawrence	Dec., Feb., May, Sept.	122	95	68	12	10	31	7	15	18	7	13	1,850
Lebanon	Nov., Jan., April, August	64	60	42	18	50	31	10	25	52	4	4	1,700
Lehigh	Oct., Jan., April, June	265	262	231	39	231	176	32	133	55	22	1	......
Luzerne	Nov., Jan., April, Sept	1,012	840	577	246	......	105	33	79	20	29	24	1,000
Lycoming	Nov., Jan., April, August	198	128	94	33	1	62	8	59	89	7	3	900
M'Kean	Dec., Feb., June, Sept.	58	36	34	2	5	15	6	10	1	10	......	......
Mercer	Dec., Feb., May, Sept.	224	159	123	37	1	37	24	21	18	30	7	350
Mifflin	Nov., Jan., April, August	40	23	21	10	......	7	3	10	3	3	5	800
Monroe	Dec., Feb., May, Sept.	52	38	28	10	......	12	5	6	5	2	6	1,800
Montgomery	Nov., Feb., May, August	292	296	209	68	......	251	28	118	24	20	2	......
Montour	Dec., Feb., May, Sept.	57	21	13	13	12	9	4	8	17	2	1	......
Northampton	Nov., Jan., April, August	160	132	106	26	......	89	16	58	4	27	3	900
Northumberland	Nov., Jan., March, August	145	104	71	33	......	27	11	18	4	8	14	5,350
Perry	Oct., Jan., May, August	40	21	21	10	30	7	10	1	20	4	1	......
Philadelphia	Every month in the year	3,691	5,587	3,792	1,774	......	2,617	1,532	791	10	438	17	28,300
Pike	Dec., Feb., May, Sept.	15	5	5	1	7	6	......	3	1	......	1	200
Potter	Dec., Feb., June, Sept	29	21	11	10	......	1	......	......	6	......	......	300

STATEMENT OF THE CRIMINAL BUSINESS OF THE COURTS OF THE COMMONWEALTH—*Continued.*

COUNTIES AND COURTS.	TERMS OF THE COURTS OF WHICH RETURNS HAVE BEEN RECEIVED.	No. of persons charged with crime	GRAND JURY.				COURT PROCEEDINGS.					RECOGNIZ FORFEITED.	
			Total bills laid before grand jury,	No. returned as true bills	No. returned ignored	No. presentments made	No. of bills tried,	No. of acquittals,	No. of convictions	Number of nolle prosequies	No. plead guilty to indictment	Number	Amount
Schuylkill	Oct., Jan., April, July	510	331	249	84	234	162	83	134	158	27	8	$5,300
Snyder	Dec., Feb., May, Sept	52	9	7	2	......	1	......	1	2	......	2	350
Somerset	Nov., Feb., May, Sept	97	41	34	5	3	25	11	13	6	......	1	300
Sullivan	Dec., Feb., May, Sept	11	11	10	1	8	8	......	9	6	3	1	200
Susquehanna	Nov., Jan., April, August	78	35	20	23	8	8	4	5	8	3	2	300
Tioga	Nov., Jan., May, August	90	80	48	19	......	6	4	11	2	2	14	7,350
Union	Dec., Feb., May, Sept	29	19	17	3	......	8	13	4	4	......	......	......
Venango	Nov., Jan., April, August	205	169	128	42	......	70	25	46	33	21	3	4,000
Warren	Dec., March, June, Sept	90	63	45	17	2	11	8	5	11	5	13	4,400
Washington	Dec., Feb., May, August	79	36	33	3	......	23	5	20	13	4	5	600
Wayne	Dec., Feb., May, Sept	53	48	27	16	37	12	6	6	6	......	3	400
Westmoreland	Nov., Feb., May, August	165	121	87	41	7	45	15	29	29	19	1	670
Wyoming	Nov., Jan., April, August	30	30	20	10	30	5	1	3	2	1	......	......
York	Nov., Jan., April, August	277	257	163	86	83	37	26	10	2	22	11	4,200
	Total	15,264	14,458	10,149	4,224	1,503	5,650	2,819	2,764	1,438	1,382	481	170,495

CHARITABLE INSTITUTIONS.

SUPPORT AND EMPLOYMENT OF THE POOR.

William Penn, in the thirty-sixth section of his great law, passed at Chester on the 7th day of October, 1682, enacted "That if any persons shall fall into decay and poverty and be unable to maintain themselves and children, or who shall die and have poor orphans, the public shall provide for their comfortable subsistence."

This is the corner stone of the Pennsylvania poor laws. In the simplest age of the province the township system for the support of the poor grew up, and we are surprised to find that thirty-two counties of Pennsylvania, in whole or in part, yet adhere to this township system. The larger and wealthier counties of the State, containing fully four-fifths of the population and wealth of the State, have adopted the improved system of sustaining their poor and unfortunate in one or more large almshouses. Each of these systems is presented in the following tables, showing the summary of the expenditure incurred in the support of this unfortunate class of our fellow citizens.

The following table shows how many counties, in whole or in part, adhere to what is usually called "the township poor."

The second table exhibits an abstract of the almshouses.

TOWNSHIP POOR.—1872.

Statement *of amount expended for support of township poor, for legal and other expenses; also, the amount of receipts, net cost and amount raised by taxation for support of the poor.*

COUNTIES.	EXPENDED FOR SUPPORT OR RELIEF OF THE POOR.									Net cost of relief	Amount raised by taxation for support of the poor
	Paid to overseers for their services	Paid to justices of the peace, and for other legal expenses	Paid for medical attendance and medicines	Paid for clothing	Paid for relief of the poor	Paid for support of insane poor	Paid for transportation	Paid for other purposes, or not specified	Whole am't expended for the year		
Armstrong	$370 00	$78 60	$497 35	$204 86	$1,664 41	$167 50	$49 50	$181 23	$3,411 45	$3,411 45	$7,854 12
Bradford	467 73	58 08	254 35	396 04	5,093 21	936 00	40 50	378 25	7,060 18	7,627 68	4,747 81
Butler	234 71	16 25	295 00	228 13	2,938 30	252 00	20 00	331 00	4,385 39	4,345 39	2,457 07
Cameron	30 00	5 00	25 00	5 00	623 00	....	....	2 00	690 00	690 00	665 35
Carbon	71 00	4 00	55 00	48 17	1,416 80	....	....	....	1,594 97	1,594 97	1,822 00
Centre	395 25	43 72	299 25	453 63	4,568 58	....	23 75	....	5,348 18	5,948 18	5,666 27
Clarion	238 00	10 03	123 00	154 84	2,940 77	....	124 85	....	3,580 01	3,539 01	2,012 99
Clearfield	420 11	57 08	218 30	299 50	2,414 66	....	20 25	100 00	3,495 40	3,482 09	3,258 12
Clinton	308 07	90 70	192 60	253 97	3,768 51	....	15 00	30 00	4,649 15	4,621 15	4,272 11
Columbia	271 25	111 10	134 50	220 32	3,662 15	158 00	31 71	158 70	4,778 79	4,773 79	3,767 13
Elk	21 00	....	83 50	26 00	762 00	....	4 50	....	897 00	897 00	300 00
Forest	10 00	....	....	11 73	305 03	....	....	....	326 76	326 76	243 97
Fulton	22 50	2 50	....	6 38	102 40	....	....	....	133 78	133 78	....
Indiana	225 79	13 40	175 30	163 75	1,319 09	....	54 50	1,227 11	3,179 63	3,179 63	3,364 52
Jefferson	126 98	48 00	93 80	53 32	1,028 75	156 00	3 00	251 54	1,787 36	1,787 36	1,512 90
Juniata	230 00	18 95	78 50	184 61	2,451 87	162 65	....	....	3,126 58	3,126 58	4,294 20
Lawrence	291 00	87 52	145 50	152 55	3,649 85	312 00	32 00	10 25	4,753 67	4,550 31	3,088 13
Luzerne	297 16	140 70	145 07	274 55	3,217 87	....	122 00	303 00	4,506 95	4,506 95	4,290 88
Lycoming	232 19	191 50	157 15	247 38	3,744 18	....	149 60	190 00	4,912 00	4,912 00	3,353 23
M'Kean	28 00	26 00	....	27 07	837 82	....	70 00	....	988 89	988 39	652 82
Monroe	141 50	12 00	155 00	184 06	1,767 00	....	7 00	....	2,266 50	2,266 50	2,141 00
Montour	63 00	1 00	13 00	60 00	640 62	....	....	....	777 62	777 62	171 03
Northumberland	310 00	124 00	328 80	330 05	6,131 57	....	78 30	43 12	7,385 84	7,385 84	4,307 00
Philadelphia	54 00	21 25	32 27	38 54	1,562 89	....	....	....	1,708 95	1,708 95	1,658 69
Pike	2 00	40	....	....	39 45	....	....	....	41 85	41 85	....
Potter	46 00	26 40	3 00	44 10	735 87	....	13 00	437 45	1,310 82	1,310 82	1,133 68
Snyder	442 56	36 91	230 25	288 20	2,394 44	....	39 25	18 50	3,490 05	3,490 05	2,984 90
Sullivan	6 00	....	....	....	519 00	....	....	325 00	850 00	850 00	552 93
Susquehanna	178 84	28 49	75 30	152 03	2,294 99	173 65	161 55	....	3,064 35	3,044 37	2,198 13
Union	290 75	73 60	205 50	152 53	2,850 60	....	32 00	....	3,650 98	3,650 98	2,225 62
Venango	63 20	20 00	27 00	65 78	2,065 73	....	144 15	....	2,403 86	2,373 86	1,834 41
Wayne	434 57	39 80	208 10	223 64	5,206 36	....	224 51	94 91	6,583 89	6,433 89	6,475 09
Wyoming	321 00	270 60	67 25	74 95	2,524 74	....	28 86	....	3,810 40	3,169 80	2,381 35
Totals	6,841 62	1,661 66	4,411 63	4,935 62	80,230 51	2,315 80	1,494 28	4,099 06	106,503 25	105,895 49	85,747 78

ALMSHOUSES.

ALMSHOUSES.	LAND.		BUILDINGS.	Value of real estate, including buildings	AT THE ALMSHOUSE.			Total cost of out-door relief	Total net expenses almshouse and out-door relief
	No. of Acres.	Cost.	Cost.		Total relieved	Value of pauper labor	Total expendit'rs.		
Adams county almshouse	270			$25,000		Unknown.	$11,000 00	$1,094 00	$6,934 00
Allegheny county home	205	$18,450	$35,000	100,000	407	$5,560 00	22,586 15	8,233 79	21,170 23
Allegheny city poor-house	60	4,320	12,000	135,000	380	550 00	25,542 35	6,488 15	28,868 11
City Farm for Pittsburg	149	14,900	40,000	150,000	562		16,177 21	11,387 81	26,418 48
Beaver county almshouse	135	6,750	18,000	32,500	67	800 00	7,055 86	449 86	7,505 72
Bedford county almshouse	525	12,500		15,896	136	200 00	6,991 56	1,881 40	8,872 96
Berks county almshouse	414	24,158		70,000	667		31,391 94	2,041 29	29,285 75
Blair county almshouse	267	10,000	5,700	28,360	157		7,800 00	625 75	8,245 75
Bucks county almshouse	360	7,232	60,000	116,600	571	2,685 00	22,356 47	1,364 34	23,412 98
Cambria county almshouse	164	4,500	11,000	35,000	66		10,015 43	2,500 00	12,515 43
Carbon county, Middle Coal Field poor district	340			56,000	168	2,400 00	24,970 80	994 19	25,310 18
Chester county almshouse	364	21,250	35,573	65,000	395	2,000 00	21 571 22	806 92	17,768 11
Clinton county, Lock Haven poor-house	1.9			2,000	49		538 15	1,583 98	2,122 13
Columbia county, Centralia poor-house	75	4,500	940	6,200	24	75	610 78	1,804 87	2,365 65
Columbia co., Poor dist. of Bloomsb'g, poor-house,	100	12,600	5,300	16,000	34		996 50	110 50	1,107 00
Crawford county almshouse	215	13,100	31,000	44,000			13,723 58	2,110 04	15,508 78
Cumberland county almshouse	300	22,500	12,000	40,000	292	400 00	4,134 00	2,600 00	6,734 00
Dauphin county almshouse	180	16,000	90,000	15,000	401	300 00	23,318 62	6,531 55	28,876 47
Delaware county almshouse	102	16,350	46,500	65,000	317	1,000 00	20,261 22	4,102 95	24,002 95
Erie county almshouse	100	Donation		150,000	188		17,467 68	18,495 64	34,897 82
Fayette county almshouse	129			30,000	126	300 00	7,543 47	1,944 04	8,317 42
Franklin county almshouse	233								
Greene county almshouse	147	5,000	7,000	25,000	93	300 00	6,133 46	91 10	6,129 94
Huntingdon county almshouse	190	7,000	5,979	15,000	62	50 00	7,097 16	1,959 95	9,057 11
Lancaster county almshouse	195			160,000	622		42,280 26	3,240 36	42,680 49
Lawrence county, New Castle poor-house	43.5	Donation	5,000	9,400	12		3,400 00	315 00	3,635 00
Lebanon county almshouse	189			80,000			12,655 24	3,104 00	14,789 29
Lehigh county almshouse	245	26,950	16,000	75,000	373	1,500 00	14,839 18	1,972 11	16,089 65
Lycoming county, Williamsport city poor-house,	5	1,600					5,563 46		5,563 46
Luzerne county, Providence poor-house	126	7,000	7,100	28,060	113	600 00	4,150 71		4,150 71
Luzerne county, Central poor-house	140	9,500	7,685	25,000	111		5,833 43		5,523 96

ALMSHOUSES—CONTINUED.

ALMSHOUSES.	LAND.		BUILDINGS.	Value of real estate, including buildings......	AT THE ALMSHOUSE.			Total cost of outdoor relief.....	Total net expenses, almshouse and outdoor relief......
	No. of acres.	Cost.	Cost.		Total relieved ...	Value of pauper labor	Total expendit'rs.		
Luzerne county, Lackawanna poor-house	149	$6,000		$12,000	27	$52 00	$3,820 06	$480 00	4,300 06
Do.......Carbondale city poor-house	90	3,500		5,000	7		871 12	1,584 35	2,175 80
Do.......Blakely poor-house	70	3,500		5,000	61		2,757 00		2,757 00
Do.......North Luzerne poor dist. poor-house,	120	9,000	$1,200	12,000			1,993 03		1,993 03
Mercer county almshouse	112	4,640	6,000	12,000	147	250 00	8,312 27	2,936 14	11,248 41
Mifflin county almshouse	200	17,000	5,000	20,000	55	50 00	4,157 51	2,227 25	6,384 76
Montgomery county almshouse	295			44,000	271	3,000 00	15,212 24	4,150 12	19,362 36
Montour county, Danville and Mahoning poor-house	115	10,000		16,000	99		5,496 41		5,496 41
Do.......Valley township poor-house	112	3,625		4,000	4		947 00	107 00	890 00
Northampton county almshouse	360		19,500	63,600	391		10,590 78	1,393 61	11,984 39
Perry county almshouse	172	5,196	3,700	12,000	92	500 00	4,924 97	894 50	5,710 11
Philadelphia county, (city) almshouse	170	51,762	859,744	2,000,000	9,765	28,816 00	313,186 76	107,176 39	389,728 27
Do......Roxboro' poor-house	40								
Do......Germantown poor-house	14	1,200	26,250	60,000	48		4,911 11	4,809 65	8,727 08
Do......Oxford and Lower Dublin poor-house,	146	10,000	30,000	66,500	118		5,942 69	1,622 55	4,077 35
Schuylkill county almshouse	268	7,000	85,000	128,500	586	1,500 00	38,296 87	8,636 35	46,549 89
Somerset county almshouse	235	5,000	10,000		50		5,400 00	1,171 76	6,571 76
Susquehanna county, Auburn and Rush asylum	157	6,280		7,500	10	100 00	9,120 30	122 75	8,986 42
Do......Montrose and Bridgewater asylum	125	4,500		5,600	7		1,512 66	302 66	1,019 96
Do......New Milford poor asylum	96	5,400		4,000		25 00	454 00		454 50
Tioga county almshouse	180	7,400	12,000	20,000	84	250 00	4,400 74	606 86	4,733 77
Warren county, Rouse hospital	400	13,500	23,000	30,000			6,744 00		6,744 00
Washington county almshouse	209	6,250		51,800	177		6,636 72	268 45	6,098 46
Wayne county, Honesdale and Texas poor-house	118						3,172 29	215 00	3,387 29
Westmoreland county almshouse	186	4,092	7,525	36,000	259	1,000 00	10,691 36	4,295 67	14,690 30
York county almshouse	130	1,630	124,000	200,000	359		29,130 19	461 40	29,113 29
Total	10,336½	452,635	1,664,696	4,430,456	19,010	54,463 00	895,667 97	231,296 05	1,051,013 69

MISCELLANEOUS STATISTICS.

HOSPITALS FOR THE INSANE.—*Whole number of admissions and discharges from the beginning of each respective Hospital to December* 31, 1872.

ADMISSIONS AND DISCHARGES.	State Lunatic Hospital, for 22 years.		West'n Penn'a Hospital, for 17 years.		State Hos'l N. district, for 2 mos.		Friends' Asylum, for 56 years.		Pennsylvania Hospital, for 32 years.		Philadelphia Hospital, for 11 years.		RECAPITULATION.		
	Males.	Fem.	Males.	Fem.	Males	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.	Total.
Whole No. admitted	1,897	1,482	1,332	993	68	30	869	868	3,403	2,987	2,274	2,783	9,843	9,143	18,986
Disch'd restored	394	321	426	316	......	......	388	378	1,522	1,472	775	860	3,505	3,347	6,852
Do...improved	418	330	297	230	......	......	169	187	737	757	487	556	2,108	2,060	4,168
Do...unimproved	571	401	146	100	......	......	142	145	497	245	179	218	1,535	1,109	2,644
Do...died	312	231	214	140	2	......	128	122	441	324	457	601	1,554	1,418	2,972
Do...not insane	2	....	5	5	......	......	....	....	....	....	13	16	20	21	41
Total discharged	1,697	1,283	1,088	791	2	......	827	832	3,197	2,798	1,911	2,251	8,722	7,955	16,677
Per cent. on admissions of those received	20.77	21.66	31.98	31.83	......	......	44.65	43.55	44.73	49.28	34.08	30.90	35.61	36.61	36.09
Per cent. on admissions of those that died	16.45	15.59	16.06	14.10	2,94	......	14.73	14.06	12.96	10.85	20.10	21.59	15.79	15.51	15.65
Per cent. on discharges of those restored	23.22	25.02	39.15	39.95	......	......	46.92	45.43	47.61	52.61	40.55	28.21	40.18	42.07	41.03
Per cent. on discharges of those who died	18.39	18.00	19 67	17.70	......	......	10.54	14.66	13.82	11.58	23.91	26.70	17.82	17.83	17.82
Number remaining in hospitals Dec. 31, 1872,	200	199	244	202	66	30	42	36	206	189	363	532	1,121	1,188	2,309

HOSPITALS FOR THE INSANE.—*Civil condition of the 18,986 patients, being the whole number admitted into the respective hospitals.*

CIVIL CONDITION.	STATE LUNATIC HOSPITAL.		WEST'N PENN'A HOSPITAL.		STATE HOSPITAL FOR N. DIST.		FRIENDS' ASYLUM.		PENNSYLVANIA HOSPITAL.		PHILADELPHIA HOSPITAL.		RECAPITULATION.		
	Males....	Females,	Males....	Females,	Males....	Females,	Males....	Females.	Males....	Females,	Males....	Females.	Males....	Females,	Total ....
Single	809	715	741	363	39	6	432	386	1,676	1,246	62	57	3,759	2,773	6,532
Married	999	583	522	162	20	17	308	325	1,561	1,362	52	79	3,462	2,828	6,290
Widowed	89	184	69	167	3	7	43	92	166	379	1	34	371	863	1,234
Unknown	....	....	....	1	6	....	86	65	....	....	2,159	2,613	2,251	2,679	4,930
Whole number	1,897	1,482	1,332	993	68	30	869	868	3,403	2,987	2,274	2,783	9,843	9,143	18,986

FORMS OF INSANITY *in the 18,986 patients admitted into the respective hospitals for the insane.*

FORMS OF INSANITY.	STATE LUNATIC HOSPITAL.		WEST'N PENN'A HOSPITAL.		STATE HOSPITAL FOR N. DIST.		FRIENDS' ASYLUM.		PENNSYLVANIA HOSPITAL.		PHILADELPHIA HOSPITAL.		RECAPITULATION.		
	Males....	Females,	Males....	Females,	Males....	Females,	Males....	Females.	Males....	Females,	Males....	Females.	Males....	Females,	Total ....
Mania	1,202	770	795	560	48	17	375	399	1,507	1,426	182	190	4,109	3,362	7,471
Monomania	32	11	72	49	....	1	41	39	505	367	....	....	650	467	1,117
Melancholia	450	567	283	301	4	4	71	93	767	950	....	....	1,575	1,915	3,490
Dementia	193	120	118	63	15	7	121	106	610	239	....	....	1,057	535	1,592
Delirum	1	6	....	....	....	....	....	....	14	5	....	....	15	11	26
Paralysis	....	....	29	3	....	....	3	....	....	....	....	....	32	3	35
Idiocy	2	1	....	....	1	....	....	1	....	....	5	9	8	11	19
Imbecility	15	7	35	17	....	1	5	4	....	....	9	11	64	40	104
Not insane	2	....	....	....	....	....	....	....	....	....	....	....	2	....	2
Unrecorded	....	....	....	....	....	....	253	226	....	....	2,078	2,573	2,331	2,799	5,130
Whole number	1,897	1,482	1,332	993	68	30	869	868	3,403	2,987	2,274	2,783	9,843	9,143	18,986

THE TAX LAWS AND THE CONSTITUTION OF 1873.

ARE OUR LAWS FOR THE ASSESSMENT AND COLLECTION OF TAXES IN CONFORMITY WITH THE CONSTITUTION OF 1873?

No former Constitution of Pennsylvania, colonial or State, has ever attempted to limit the admitted sovereign power of the Legislature in regard to the assessment and collection of taxes. Common law, common sense, and the direct responsibility of the representative to his constituents has been hitherto found a sufficient safeguard. I regret that the framers of our present Constitution did not leave well enough alone, or else use much clearer terms to express their meaning. No two members, even of the committee, seem to know what was meant by the first three lines of Article IX, section 1. If the purpose was to impose a limitation on the taxing power they ought to have more clearly expressed their meaning.

Under our former Constitution a peculiar system of taxation had grown up in our State. The Commonwealth collected from our great corporations most of the revenue necessary to pay the State expenses, leaving the burden of local taxation to be paid by the real and personal property as found upon the assessors' books. Did the framers of this new Constitution mean to change our tax system? Most of them that I have spoken to say "no," and point to the term "class" as the word, the corporations being a class upon which the Legislature may impose such taxation. The corporations do not recognize this as conclusive, and several of them have, as I understand, already entered appeals to test this matter in the Supreme Court

Article IX, section 1, declares that "All taxes shall be uniform, upon the same class of subjects, within the territorial limits of the authority levying the tax, and shall be levied and collected under general laws." Now the Legislature is the authority levying State taxes, and I assume it can treat corporations as a class, and levy a tax upon them, and need not extend that to the general property of the citizen. But can the city councils of Philadelphia also decide that stock jobbing is a class, and levy thereon all the city expenses? Can the county commissioners of Lancaster county say real estate is a class, and we will levy upon it all the expenses of said county? Can the commissioners of Dauphin county say personal property is a class, and levy on it all the county expenses? Can the city councils of Pittsburg say that venders of merchandise are a class, and we will levy upon them the expenses of the whole city? And if these authorities can thus act, why can not every other board possessing the taxing power select its class, and exhaust the last dollar this class owns? Such are some of the difficulties we encounter by this change.

Again, if any change is made by this Constitution, when and how does it take effect? Does the adoption of the Constitution nullify all laws inconsistent with its spirit and intent, or does this change only take place when the Legislature in accordance with the injunctions of the thirty-second section of the schedule shall have passed the laws necessary to carry these changes into effect? This last interpretation I assume to be the correct one. If not, half the laws in Purdon's Digest might by one or another be declared to be null and void. The Legislature may safely be trusted to determine what legislation must be changed to conform to the new Constitution, but to permit each citizen to decide this would bring endless confusion. For example, our legislation in regard to the levying and collection of taxes is not now regulated by general laws. The city councils of Philadelphia assess the entire taxation upon that city, amounting this year to $12,800,000. But in Pittsburg, and probably all the other cities, the councils assess only city taxes, county commissioners the county taxes, school boards the school taxes, &c.

In regard to the collection of taxes there are several different systems. The system that has most probable claim for being considered a general law is the old system where the county commissioners appoint the township collectors. But nearly half the State has adopted the more modern system by which the county treasurer and deputies collect the taxes. The city taxes are usually all payable at the city treasurer's office. Now, however, this Constitution enjoins "that all taxes shall be levied and collected under general laws." The Legislature has not at its first session made all these changes, and can put in the plea that it is only enjoined as soon as may be after the adoption of this Constitution to make the necessary changes.

A carefully digested tax law, so as to do even approximate justice to all classes of citizens is the most difficult task ever undertaken by any legislative body, and an entirely perfect one never yet has been enacted by human legislators. No one session is sufficient for such a task unless a bill has been carefully matured by a former commission or committee. If the organic changes required by this new Constitution are to be completed within any reasonable time the sooner they are begun the better. I assume that the duty of the coming Legislature will be to at least inaugurate measures looking to such a change, conforming our tax laws to the requirements of the new Constitution. Can that body hope for its ways and means committee to mature such a bill during its session? If so, it will certainly require a committee remarkable both for its industry and intelligence. Most probably a commission of experts is all that can be reasonably hoped for. I have therefore thought it within my province to collect such materials as might furnish the ground work of such a revision of our laws on the important subject of the levying and collecting taxes. The two leading inquiries upon this subject are: first, what is the probable amount of taxes annually assessed and collected for all purposes in our State; and second, how can this amount be most equitably and justly apportioned upon the entire property of the State. The amount of taxes assessed for State purposes constitutes only a small portion of those assessed under the authority of State laws, and the whole should be carefully considered by the Legislature in any action upon this subject, especially where the entire system is to be revised to conform to our new Constitution.

Our returns in regard to State taxes are full and accurate, but in regard to local taxation are wretchedly imperfect. I have procured returns from every county in regard to the amount assessed for county purposes in 1874. (See pages 5 and 6 of my present report.) But of the cities outside of Philadelphia not a single return. From the boroughs and townships nothing but an approximate estimate to enlighten us. In this respect we are very far behind the State of Ohio. In that State every local board imposing a dollar of taxation makes return to the county authorities. These in turn report to the State Auditor, and his annual report to the Legislature spreads the whole before the people of the State. That body is therefore as well informed in regard to local as it is in regard to State taxes. I suggest that some similar provision be inserted in your legislation in this State by which the amount of all local taxation will be reported to the county authorities, and by them annually reported to your Department of Internal Affairs to constitute a portion of the annual report of that department. By this means the Legislature will know the bearing of its legislation, and the people of the State the entire amount collected for local as well as State taxation The State government is not likely to require in the future so great an amount of taxation as it has since the close of the war. In the legislation of 1873 and 1874, a considerable revision of our State taxes took place, and a reduction of fully a million, probably $1,200,000.

I here insert, in tabular form, a table, showing the amount and the sources from which the same was collected for 1872 and 1873.

STATEMENT *of receipts at the State Treasury from the several sources of revenue during the fiscal years ending November* 30, 1872, *and November* 30, 1873.

SOURCES OF REVENUE.	1872.	1873.
Corporations.		
Railroad, canal, express, navigation and transportation companies	$2,412,730 75	$2,869,082 80
Coal, iron, improvement, mining and manufacturing companies	438,197 88	660,538 52
Passenger railway companies	74,134 40	74,537 19
Bridge, turnpike and plank road companies	31,231 61	34,368 25
Banks	341,021 31	342,499 63
Counties, cities and boroughs	102,464 21	107,057 19
Gas and water companies	36,750 26	50,633 92
Oil companies	90,482 93	48,221 37
Telegraph companies	6,564 50	7,952 01
Insurance companies, (domestic,)	116,389 59	113,990 76
Insurance companies, (foreign,) licenses, &c	351,396 08	353,490 78
Premiums on corporation charters	101,584 74	68,343 76
Annuity for right of way, (Erie railroad,)	10,000 00	10,000 00
All other companies and associations	24,693 01	46,636 00
Miscellaneous taxes.		
Tax on personal property	561,316 12	541,607 91
Notaries public, tax on receipts	1,683 67	2,711 27
Notaries public, commissions		7,450 00
Tax on enrolment of laws	30,080 00	36,800 00
Tax on logs	900 00	1,500 00
Tax on writs, wills, deeds, &c	119,380 32	113,117 52
Tax on certain offices	20,770 56	10,723 89
Collateral inheritance tax	354,819 98	327,973 99
Tavern licenses	346,116 70	321,322 73
Retailers' licenses	424,941 83	424,974 89
Theatre, circus and menagerie licenses	3,020 45	5,121 75
Billiard, bowling saloon and ten-pin alley licenses	7,064 59	10,552 94
Eating-house, beer-house and restaurant licenses	42,316 81	42,165 02
Peddlers' licenses	2,679 61	2,830 38
Brokers' licenses	5,335 75	10,736 98
Patent medicine licenses	1,112 00	3,875 91
Brewery and distillery licenses	5,821 45	8,009 47
Millers' tax	641 16	4,486 84
Pamphlet laws	510 20	714 67
Fees of public officers	5,801 00	19,681 57
Auctioneers' commissions and duties	36,703 97	
Auctioneers' commissions		13,765 34
Fines and penalties		4 00
Collections on outstanding indebtedness.		
Refunded cash	4,938 05	3,715 70
Dividends on bridge stocks	240 00	
Sale of public property and escheats	26,202 45	
Sale of public property		100 00
Cases of conscience	880 00	945 00
Accrued interests	4,204 31	4,297 97
Lands patented	45,724 73	53,035 48
Commutation of tonnage tax, as per act, 1861	460,000 00	230,000 00
Allegheny Valley railroad, interest on bonds, per act 1869,	87,500 00	87,500 00
	6,738,346 95	7,077,073 40

I think our laws as now revised will, in future, yield about as follows:

From corporations, about	$3,500,000
From miscellaneous sources, about	2,000,000
From outstanding indebtedness	500,000
	6,000,000

On pages 5 and 6 of my present report can be found tabularized to each county the amount of county tax assessed in each county for county purposes. The councils of Philadelphia assess the entire taxation of that city for all purposes, and hence its return includes the whole taxation of that city. The entire aggregate of that table is $16,804,830 98. The amount of school tax we ascertain from the school report for 1873, $8,235,120 41. One of the heaviest taxes in most of the rural counties is the road tax, in regard to which we have not a single return. I estimate this road tax in the State at $6,000,000. The poor taxes, assessed for the support of the poor, partly on the township system, but chiefly in poor and almshouses, I have estimated at $2,000,000. Omitting Philadelphia, whose returns we have, I have estimated the city taxes of the other twenty-one cities at $3,000,000. If I am even approximately correct the entire taxation of the State, as stated, is $42,039,951 39. This amount, or somewhere near it, has in one form or other to be collected from the property holders of Pennsylvania each year. Nobody likes to be taxed—each one is anxious to have the burden transferred from his own shoulders to his neighbors. But the duty of the Legislature is to have this as equally distributed as human legislation can do it. If we knew the actual cash value of every species of property in the State, and could divide the tax to be raised by this, we could exactly tell what the percentage should be. But an approximation is the best that the wisest legislation can accomplish.

One other consideration comes in here. By the immemorial usage of our State a considerable amount of property is exempted from the payment of taxes of all kinds. This includes the buildings owned by the State, the county, the school boards for public purposes, and also churches, cemeteries and burial grounds, &c. I have been anxious to procure returns to show the amount so exempted. In only a few counties do their tax records show the value of this exempted property. From my correspondence, and the few returns I have received, I assume that property hitherto exempt bears the relation of about one-tenth to the entire taxable property. The design of the new Constitution undoubtedly was to largely reduce this exempted property, what the result will be time must determine.

The assessment laws of our State, since the period of the revolution, have been revised and re-enacted some four or five times with verbal modifications each time; but the essential feature has not been changed from what is now required, to wit: *A cash valuation of all property upon the assessors' books.* The actual figures upon the tax records have represented however only about one-third, one-fifth, and in some cases only a tenth the cash value. This, too, though the oath administered to assessors has been as strong as the English language can make it. Considerable efforts have been made to correct it, and the actual returns of our latest assessments, (see my report, pages 5 and 8,) show in the whole aggregate that our assessed values have reached about one-half the true value. In three counties, in my judgment, the true value has been reached; in sixteen others nearly that value, and in the forty-seven remaining counties, every figure from two to six is represented in bringing up the assessed to the true value, and one county is only assessed at one-eighth its true value.

I do not believe that anything like one-half the personal property owned by our citizens is found upon our assessors' books. In Ohio, the value of personal property upon the assessors' books is about one-half that of its real estate; in New York, about one-fourth, but in our State only about one-tenth. This great injustice has been, to a considerable extent, modified in our State by taxing corporate wealth in another form, to wit: By requiring the officers of the corporations to become the tax collectors, and retain the same from dividends paid by the corporation. In fact, two-thirds of our State tax is now derived from this corporate tax. Several of these corporations have, report says, resolved to appeal from the accounts settled by the Auditor General, and bring before the Supreme Court the constitutionality of our taxing laws in regard to this species of property. But it should be kept in mind that by far the larger amount of corporate wealth is not taxed at all for county, city, school, road or poor taxes. The large State tax they pay is not even a full equivalent for their escape from nearly all local taxation.

In regard to the true value we have two independent valuations, one by the census returns of the United States, and the other by our own assessors. The United States, after giving our State assessments, add their statement of what they call the true value. Their statement of our assessed value in 1870 was $1,313,236,042. Their estimate of the true valuation was nearly three times that amount, or $3,808,340,112. They also give us their returns of the annual production of the preceding year as follows:

Agricultural productions	$343,077,991
Manufacturing productions	711,894,224
Mining productions	76,208,390
	1,131,180,605

Our State assessment for 1874 returns the value of all property on the assessors' books at $1,770,765,415. My own estimate of the true cash value of this is given by counties in my present report, on pages 7 and 8, and nearly doubles the assessors' value, aggregating $3,425,325,415. The value of property not upon the assessors' books we have to reach by other means. This includes nine-tenths of our money and active business capital, and nearly all our corporate wealth. In regard to the latter, for example, railroads—while our returns are very full, those within the State are mixed up with those without, so that an exact statement cannot be procured. I was at considerable pains in my last year's report to separate the cost of railroads within the State from the general returns. The report of the late examining committee of the Pennsylvania railroad has gone far to confirm my own estimates, and I reproduce from page 161 of report of 1873 as follows:

Pennsylvania railroad and its branches	$140,837,262
Reading railroad and its branches	66,995,110
Railroads in Pennsylvania, independent of Pennsylvania and Reading	64,139,168
Canals in our State	28,151,219
Street railways	8,131,807
Telegraphs	5,659,167
	313,913,735

The banking and moneyed capital of the State I put as follows:

National banks	$53,010,240
State banks	8,370,168
Savings banks, (estimated)	30,000,000
Building and loan associations, (estimated)	25,000,000
Private banks, and all private discounting of notes and mortgages	125,000,000
	241,380,408

Pennsylvania paid last year, as per insurance bureau returns, $23,617,953 for fire and life insurance alone.

The capital of these companies cannot be below	$60,000,000
The capital of manufacturing companies cannot be less than	60,000,000
	120,000,000

The active business capital in use by wholesale and retail merchants, liquor dealers, &c., is certainly not below $200,000,000.

This would give us as follows:

Railroads, canals and telegraphs	$313,913,735
Banks and money dealers	241,380,408
Insurance and manufacturing	120,000,000
Wholesale and retail merchants and liquor dealers, &c.	200,000,000
True value of real and personal estate on assessors' books,	3,425,325,415
	4,300,619,558

This, I estimate, as the approximate value of all property in Pennsylvania which the Legislature could hope to reach by her taxing laws, if every citizen was so conscientious as to faithfully report its true cash value. My own estimate is about fifteen per cent. below that of the census returns. If, therefore, these returns and estimates of taxation and value of property are approximately correct, then ten mills or one per cent., if valued at cash rates, would be required to pay the taxation now imposed for all purposes in Pennsylvania.

THE LUMBER TRADE

Originally the whole of our State was one vast forest, aptly described in the royal charter to William Penn as *Penn's woods*. A little less than two centuries has so greatly changed the aspect of things that we are now told that twenty years more will leave our productive forests exhausted, and Penn's woods must cease to even afford timber enough to furnish supplies for domestic consumption. It therefore behooves our citizens to examine carefully into our present stock, and how the same can be husbanded for the use of coming generations.

NATIONAL CONVENTION OF LUMBERMEN.

The "National Convention of Lumbermen" met at Williamsport, Pennsylvania, June 23, 1874.

The committee on the nomination of permanent officers for the Convention reported as follows:

For President—Hon. L. D. Wetmore, of Warren, Pennsylvania.

Vice Presidents—Hon. J. G. Thorp, of Eau Claire, Wisconsin; Hon. Ezra Rust, of Saginaw, Michigan; C. T. Marston, Hartford, Connecticut.

Recording Secretaries—J. R. Smith, Buffalo, New York; H. H. Colquitt, Savannah, Georgia.

Corresponding Secretary—J. Henry Symonds, Boston, Massachusetts.

The report was accepted, and the gentlemen nominated were unanimously elected.

Judge L. D. Wetmore then took the chair, and made an able and comprehensive address.

Hon. W. H. Armstrong then made an address of welcome in behalf of the Williamsport lumbermen.

The committee on the order of business for the Convention presented their report, the first clause of which was adopted as follows:

Your committee would respectfully recommend that a National Association of Lumbermen be now formed, and that a committee of five be appointed on articles of association.

The committee was subsequently announced, as follows:

W. H. Armstrong, of Pennsylvania, Chairman; H. Savidge, Michigan; J. G. Thorp, Wisconsin; S. T. Drew, Vermont; W. H. Gleason, Florida.

The second recommendation of the committee, that this Convention enter its protest against the proposed treaty of reciprocity with Canada was read.

This recommendation pending, the following resolution was presented by Hon. W. H. Armstrong, of Pennsylvania :

Resolved, That in the judgment of this Convention the proposed treaty of reciprocity with Canada would be injurious to the industrial interests of the whole country, and should not be ratified ; that its effect upon the business which we especially represent would be most disastrous, and would compel a large reduction in wages, in order to compete with the cheaper labor of Canada, or the suspension of business in many sections of the country where it is now extensively carried on.

This resolution elicited a very earnest discussion in which Messrs. Armstrong, of Pennsylvania, Rust, of Michigan, Drew, of Vermont, Johnson, of Maryland, Colquitt, of Georgia, Bartram, of Michigan, Blanchard, of Pennsylvania, and Gleason, of Florida, participated.

The committee on unfinished topics in the report on order of business reported the following resolutions :

Resolved. That two committees, five each, one for white pine, and one for yellow, from the different manufacturing points, be appointed by the chairman to recommend rules for the uniform inspection, measurement and classification of lumber, to report at the next meeting of this association.

Resolved, That a committee of seven be appointed to procure statistics covering the amount of white pine and yellow, and other valuable timber standing in the United States and Canada, and where located ; also, the production, distribution and consumption of the same, and such other statistical information as would give the most accurate idea obtainable on all matters of interest to the lumber trade.

The committees, ordered in these resolutions, were announced by the chair as follows :

Committee on Inspection of White Pine—P. B. Merrill, Williamsport, Pennsylvania, Chairman ; T. M. Avery, Chicago, Illinois ; John S. Estabrook, East Saginaw, Michigan ; L. G. Mason, Muskegon, Michigan ; Thad. C. Pound, Chippewa Falls, Wisconsin.

Committee on Inspection of Yellow Pine—H. H. Colquitt, Savannah, Georgia, Chairman ; W. H. Northrop, Wilmington, North Carolina ; J. D. Gardner, Pensacola, Florida ; W. Denny, Pascagoula, Mississippi ; C. S. Langdon, Darien, Georgia.

Committee on Statistics—Ezra Rust, Saginaw City, Michigan, Chairman ; E. W. Durant, Stillwater, Minnesota ; J. J. Dale, Savannah, Georgia ; A. A. Sumner, Albany, New York ; George W. Lentz, Williamsport, Pennsylvania ; A. C. Calkins, Chicago, Illinois ; Charles J. L. Meyer, Fond du Lac, Wisconsin.

R. M. Forsman, of Williamsport, Pennsylvania, offered the following resolution :

Resolved, That this Convention do hereby recommend to all persons engaged in the lumber trade the importance of forming local organizations.

The following amendment was offered by W. H. H. Bartram, of Michigan:

And that local organizations be requested to communicate to the National association the basis of their organization, and the names of their officers, so that official communication may be maintained.

The amendment was accepted, and the resolution was adopted.

E. M. Blanchard, of Pennsylvania, offered the following resolution, which was adopted:

Resolved, That a committee of five be appointed to devise means for regulating the supply of lumber in accordance with the demand.

The committee was appointed as follows:

G. W. Lentz, Williamsport, Pennsylvania; H. M. Prentiss, Bangor, Maine; S. H. Webster, East Saginaw, Michigan; S. B. Townsend, Ionia, Michigan; A. C. Hopkins, Lock Haven, Pennsylvania.

W. H. H. Bartram offered the following resolution, which was referred to the executive committee:

Resolved, That a committee of three from Michigan, consisting of T. W. Palmer, John S. Estabrook and W. M. Ferry, be appointed to collect statistics showing the result of the so-called reciprocity treaty on the lumber trade of Michigan and adjacent States, said committee to raise the funds for defraying the necessary expenses of such work. The information to be collected and presented to the Senators from that State prior to the next session of the Senate, and a copy of the same to be placed on file with the Secretary of the association, and that a like committee with similar instructions be appointed from each of the States of Pennsylvania, New York and Wisconsin, and that said committee of twelve be instructed to appear before the committee to whom the treaty is referred, and that they be requested to call to their assistance lumbermen from all parts of the country, to the end that the true interests of the lumber trade may be fully understood by the Senate before a decision is reached on this question.

The committee on permanent organization made the following report, which was adopted:

President—L. D. Wetmore, Warren, Pennsylvania.

Vice President—J. G. Thorp, Eau Claire, Wisconsin.

Recording Secretary—F. E. Embick, Williamsport, Pennsylvania.

Corresponding Secretary—J. Henry Symonds, Boston, Massachusetts.

Executive Committee—W. H. Armstrong, Edgar Munson, Williamsport, Pennsylvania; R. K. Hawley, Baltimore; James R. Smith, Buffalo; T. L. Kinsey, Savannah, Georgia; George E. Scott, Pensacola, Florida; C. T.

Marston, Hartford, Connecticut; H. M. Prentiss, Bangor, Maine; N. B. Bradley, Bay City, Michigan; Thad. C. Pound, Chippewa Falls, Wisconsin; William Knight, St. Paul, Minnesota.

The report of the committee was adopted.

THE NATIONAL ASSOCIATION.

We extract the following article from *The Timber Trades Journal*, of London, the leading paper, published in England in the interest of the lumber trade. It will be seen that it sets forth very effectively the objects and advantages of the association.

On Tuesday last, lumbermen from various parts of the United States assembled in Convention at Williamsport, Pennsylvania, for the purpose of establishing a National association, which would represent the interests of their trade in that country The experiment is unquestionably a bold one, and if successful there can be little doubt that the projected society will exercise a powerful influence over the future of the lumber industry on the American continent. The astonishing expansion and immense proportions which the timber trade of the States has so quickly attained, render it in the highest degree advisable that a properly constituted body with a controlling power should direct its further development, endeavor to remove the obstacles that impede its progress, and harmonize interests that may be at variance. At a time when apprehensions more or less well-founded are beginning to be entertained that the timber resources of the country are decreasing too rapidly, it is also peculiarly appropriate that those most deeply affected by the question should meet and investigate it thoroughly. The great advantages that other industries have derived from the combined action of those engaged in them, is the best guarantee that the lumbermen of North America will most effectually secure the present and future prosperity of their trade by a sincere and hearty union. Whether the spirited projector of the movement, Mr. J. Henry Symonds, of Boston, should witness the immediate adoption of his well devised plan or not, matters little, as its ultimate success is inevitable, it being the only true basis upon which enduring trade can flourish.

The exact programme to be carried out at the Convention has not, so far as our information goes, been published; indeed it would have been difficult to have pre-arranged any settled course of action, seeing that the delegates represent so many districts wide apart, and that it would, therefore, be difficult to foresee what subjects would be considered of most general importance. One of the most pressing requirements of the trade in the United States, however, seems to be a uniform survey of lumber. Complaints are rife in many localities that the measurement of lumber is carried on in a manner detrimental to the interests of the dealer, and we may expect to see this subject of common interest fully discussed. Another great want of the trade is a proper classification of wood. At present it is impossible to tell from the quotations of prices what the quality of the lumber is, unless a person be specially acquainted with that particular market, and this, in a country where there are so many great centres of produce and of sales, renders it extremely difficult to ascertain the actual value of certain classes of goods. In order to give effect to the latter reform, it is only necessary that the delegates should come to a decision among themselves, as there can be no difficulty in classing the various qualities of timber grown in each part of the country. The question of transport is already assuming a serious aspect in the States, owing to the action of some of the leading lines of railways which have changed the rates of freight rather arbitrarily. Railway companies may, however, change their front when they have to deal with a united trade instead of with individuals. These are, we believe, some of the most prominent questions under consideration at the present moment by the meeting in Williamsport. We hope, for the sake of the great interests at stake, that unanimity will prevail, and that no sectional differences will be permitted to mar this judicious attempt to nationalize the lumber trade of the United States. We hope, moreover, that the delegates will not separate without establishing some central and permanent organization which will watch over the interests of the trade, and draw closer the bonds of union which ought to exist among those who have a common object in view.

THE TIMBER SUPPLY.

We extract the following communication from the Montreal *Gazette* of July 15th:

To the Editor of the Gazette:

SIR:—I find in your issue of Saturday an article copied from the St. John, New Brunswick, *Telegraph*, on the subject of the timber supply, from which it appears that that province which has for so long a time furnished a large amount of the consumption in Great Britain and the United States is about used up, the St. Croix being now the only source of supply, and it appears from that paper that the reason of its holding out so long is to be attributed to a large amount of the timber territory, drained by that stream, being in the hands of private parties, who, however, to meet the demand, have been recklessly sacrificing their property, reducing year by year the dimensions of the timber they get out, while one-third of the whole product is now of the very inferior and almost valueless description called hemlock. The pine is all used up, and it is evident but a few years will serve to throw them out of competition with the province of Quebec in the matter of spruce.

Since I brought the timber question to the notice of the American public in the communications which have been published in the *Gazette* and the Boston *Lumber Trade*, I notice the question has been pretty extensively discussed by the American press, and, taking the alarm, a memorial was sent by the President to Congress, strongly urging the necessity of passing an act providing for the preservation of their timber, and giving bonuses for tree planting—a measure which should have been adopted before the timber lands were all grabbed up by railway corporations, speculators, &c.

I showed in those communications what has not since been successfully disputed in the discussion of the question, that the United States would use up all the pine timber they have east of the Rocky mountains in from ten to twelve years, and that all our pine and spruce would not give them a full supply of their annual consumption for three years if called on to do so. And now, as serving further to draw attention to the question, and in hope that our lumbermen will take it into serious consideration, and realize the necessity and value of curtailing their operations, I would ask them to reflect on the position the United States would be placed in, and what the price of lumber must be in Canada, when it will require one-third more than the tonnage of all the sailing vessels of Europe and America combined to freight the present consumption of pine alone, and double the amount of tonnage of all Europe and America for the transportation of their present consumption of commercial woods of all kinds from the Pacific coast, if they are to be found in that quarter. Is it not evident from this view of the question which is based on their own Congressional returns of the consumption, that the commercial woods of Canada will in a few years reach a value immensely beyond that of any other description of property we possess? And is it not utter folly for the owners of timber property to be continually, as it would appear, running a race with each other, to see who will soonest come to the end of their supplies, wasting their time, working hard, and sacrificing a material so valuable and indispensable without any earthly advantage resulting to themselves or the home community, when half the labor and capital expended would enrich them all, and doubly prolong the time of exhaustion of their stock in trade, which no amount of capital and labor could for generations replace? So far as regards that invaluable wood, the white pine, every tree of which will be worth as much within the next decade as black walnut is to-day—the Ottawa lumbermen have the control in their own hands, and are able to govern the markets both of Britain and the middle and eastern States of America to their own advantage, if they will make the effort. Let them curtail the supplies by one-half, and they will secure a return of ten dollars for one of profit they now make, and those who hold timber and are able to preserve it from the axe will yet do better.

The question of timber exhaustion is met by some with the argument that iron will take its place to an extent sufficient to keep down its prices, but facts are against this view of the question. Let any one travel through Great Britain, and he will neither see any room for improvement, or improvements to any appreciable extent going on; and yet that old and long finished up country consumes annually five millions of loads, or over twice as much as Canada consumes and transports to all countries—paying, at the same time, double what it is sold at here, notwithstanding her abundance of coal, iron, and cheap labor skilled and unskilled, and she will continue to use timber as long as it is to be had, no matter at what cost; so far as regards the United States, it must reach four times its present price before its place is supplied to any great extent by iron or any other product, for it is to them a material absolutely indispensable.

Sweden, which has hitherto been the great timber supplying country of the north of Europe, finding the drain upon her resources so exhausting, has also taken the alarm, and within a few weeks back has passed an act in effect prohibiting the cutting of timber of smaller dimensions than ten inches in diameter, on the public domain and all private lands, annulling at the same time all contracts made for timber on account of private parties prior to the passing of the act. As a large amount of their production consists in deals of from five to seven inches wide, this supply will be cut off, and the cost will be much enhanced in furnishing a large description which can only now be found at great distances from the floating streams. It takes a hundred and twenty-five years to grow pine trees ten inches in diameter in that country.

Russia reserves all the timber on the banks of her streams for four miles back, as a breakwater and reservoir to preserve the country from inundations; yet here her greatest wealth of timber is to be found; but the home and foreign supply must be drawn from beyond that distance. A Russian timber firm in London that owns the timber on a river and its tributaries in that country which empties into the White sea, as large as the Ottawa, informed me that they are now reduced to supplying themselves with timber material of from six to ten inches in diameter, and that Russia has but little commercial timber available for the English market. Parties in Britain now look upon the north of Europe as pretty well "played out;" but they are quite sure Canada is yet one unbroken forest. One influential journal, the London *Standard*, after ransacking the European timber sections and finding the supplies all but exhausted, turns its attention to Canada, and assures the British public that there need be no apprehension of a timber famine, as we "have a supply for the most exacting populations of the earth for centuries;" while we ourselves have calculated our supply as not sufficient for the United States alone for a period of three years. Another journal, the *Building News* of the same city, equally well informed on the subject, sets down our timber territory at "nine hundred millions of acres," or twelve "times the area of Great Britain, all told," and what is puzzling to them is that the supply is so enormous, and yet the material so dear in their market." This is the sort of information furnished the people of Great Britain, who are so deeply interested in the question of the timber supply, by some of their leading journals; but they will, however, wake up to its true position when they find the United States will be forced, at higher prices than are now paid in England, to secure all the timber we have, in order to supply the middle and Eastern States, which in five years' time, will be totally stripped of their pine, and pretty well through with their spruce timber, and will also be forced to compete with them for supplies in the north of Europe, and in India and Japan, which are pointed to by some English writers somewhat better posted on the subject, as sources from which in a few years hence supplies must be drawn .

I understand a meeting of those engaged in the lumber and timber trade in the provinces of Ontario and Quebec is to take place some time in the fall, at Ottawa, to try and arrive at some means of curtailing the supplies —a very wise measure.

Yours truly,

J. LITTLE.

MONTREAL, *June* 13, 1874.

ANNUAL LUMBER REPORT.

ESTIMATE OF LUMBER IN THE WILLIAMSPORT MARKET, JANUARY 1, 1873, AS FURNISHED OFFICIALLY TO THE WEST BRANCH LUMBERMAN'S EXCHANGE.

YARDS.	PINE.	HEMLOCK.	LATH.	PICKETS.
E. B. England & Co	3,025,000			25,000
Beaver Mills and Lumber Co	9,440,000		1,000,000	
Tabor & Goodrich	1,000,000	2,800,000	300,000	
Geo. W. Quinn	2,250,000		800,000	120,000
TenEyck, Emery & Co	5,500,000		2,700,000	
Barrows, Bowman & Co	5,000,000		1,630,000	167,000
Filbert, Otto & Co.	5,000,000		2,000,000	150,000
Thompson, Harper & Co.	5,618,480	338,300	1,582,700	47,260
Tinsman & Wolverton	7,127,500		757,000	
John Dubois	3,226,000	715,000	1,387,000	
P. G. Fessler & Co	4,881,661		1,380,000	
Starkweather & Munson	4,500,000		2,000,000	
Finley, Young & Co.	5,700,000		2,700,000	25,000
Brown, Early & Co	8,703,000		1,332,800	283,060
Foresman, Merriman & Gibson	4,000,000		590,000	500,000
Slonaker, Howard & Co.	2,750,000	125,000	1,000,000	100,000
White, Lentz & White	6,494,000		2,430,000	197,800
F. Coleman	6,610,205		1,994,200	148,210
Canfield & Colton	4,500,000	300,000	1,500,000	
Lutscher & Moore		2,000,000	50,000	400,000
B. H. Taylor & Son	4,000,000	550,000		
P. Herdic & Co	7,000,000		2,034,600	
Reading, Fisher & Co	4,397,000		1,130,100	30,650
Krouse, Herdic & Co.	5,327,000	1,082,000	2,892,000	
Eder, Housel & Deemer	2,831,259			
Dodge, James & Stokes, Henry James & Co.	19,068,802	897,140	6,776,300	79,300
Total, Williamsport	137,949,907	8,807,440	39,966,700	2,273,280
Lock Haven	32,638,741	1,930,000	5,163,000	1,503,000
Port Deposit	4,000,000			
Baltimore	2,000,000			
Philadelphia	10,818,990			
Total, January 1, 1873	187,407,638	10,737,440	45,129,700	3,776,280

COMPARATIVE STATEMENT.—STOCK ON HAND, JAN. 1, 1872.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	50,550,603	2,832,500	12,687,600	1,687,815
Lock Haven	7,179,000		710,000	410,000
Port Deposit	5,250,000			
Baltimore	2,250,000			
Philadelphia	13,486,280			472,890
Total, January 1, 1872	78,715,883	2,832,500	13,397,600	2,570,705
Do...January 1, 1873	187,407,638	10,737,440	45,129,700	3,776,280
Difference	108,691,755	7,904,940	31,732,100	1,205,575

STOCK ON HAND, JANUARY 1, 1871.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	122,505,694	5,737,000	33,604,800	2,646,150
Lock Haven	22,312,000		2,289,000	720,000
Port Deposit	950,000			
Baltimore	3,000,000			
Philadelphia	10,249,971			245,133
Total, January 1, 1871	159,017,665	5,737,000	35,893,800	3,611,283
Do. . January 1, 1873	187,407,638	10,737,440	45,129,700	3,776,280
Difference	28,389,973	5,000,440	9,235,909	164,997

STOCK ON HAND, JANUARY 1, 1870.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	134,166,157	6,098,000	27,627,300	1,653,065
Lock Haven	58,500,000			
Port Deposit	1,500,000			
Baltimore	3,500,000			
Philadelphia	11,000,000			
Total, January 1, 1870	208,666,157	6,098,000	27,627,300	1,653,065
Do. . January 1, 1873	187,407,638	10,737,440	45,129,700	3,776,280
Difference	21,258,519	4,639,440	17,502,400	2,123,215

The above is a correct statement of the amount of Susquehanna lumber, lath and pickets in first hands, in the above named markets, on the first day of January, 1873. To the horse disease, which swept over the whole country during the past season, and to the strikes and riots of the working-men in various portions of the State during the same time, is attributable the decrease of the retail demand supplied from this and the Lock Haven markets. The close of the old and the beginning of the new year, however, brought a larger demand for lumber than usual; shipments have been quite brisk, and the lumbermen may congratulate themselves that, notwithstanding the vicissitudes and interruptions to business operations the year just closed has been a very gratifying one.

WILLIAMSPORT LUMBER SHIPMENTS.

Statement showing the shipments of lumber by canal and railroad, from June 30, 1873, with comparative statements of increase and decrease.

The shipments for the year 1873, as compared with 1872, show a corresponding increase, and we give the shipments for each month for the two years. Our readers can then form a correct estimate of the shipments from this point.

1872.	CANAL.	CATAWISSA	P. AND E.
	Feet...	Feet...	Feet...
January		2,631,640	1,770,720
February		3,692,432	4,443,600
March		4,580,840	5,282,920
April	1,977,000	5,273,000	3,691,920
May	12,184,000	6,124,160	4,541,520
June	10,297,000	7,849,542	4,324,861
	24,458,000	30,151,614	24,055,541

1873.	CANAL.	CATAWISSA	P. AND E.
	Feet...	Feet...	Feet...
January		4,620,500	2,576,640
February		6,262,000	4,008,960
March		9,066,500	7,109,360
April		16,695,000	9,970,480
May	12,303,829	10,526,000	9,479,860
June	9,481,000	11,280,500	7,567,200
Total for 1873	21,784,829	58,450,500	40,712,500
Total for 1872	24,458,000	30,151,614	24,055,541
Increase and decrease	2,673,171	28,298,886	16,656,959

The canal shows a decrease up to July 1, of 2,673,171 feet; the Catawissa a gain of 28,298,886, and the Philadelphia and Erie a gain of 16,656,958 feet, making a total increase over the year 1872, up to July 1, of 42,283,674 feet.

The total shipments up to July 1, 1872, were 78,665,155 feet; up to July 1, 1873, 120,948,829 feet.

Williamsport, Pa., *July* 18, 1873.

Edgar Munson, Esq.,

President West Branch Lumberman's Exchange:

Dear Sir:—The committee appointed by you under a resolution of the Exchange, to compile statistics of the shipments of lumber for 1873 to the present time, and a statement of logs rafted out of the Susquehanna and West Branch booms; also comparative statements for the year 1872, have the pleasure to present the following report:

Comparative statement of lumber shipments from Williamsport and Lock Haven, from January 1, 1873, to July 8, 1873, and during the corresponding period in 1872.

1873.

	Feet.	Feet.
Shipped over the West Branch Canal..........	41,014,029	
Shipped over the Catawissa railroad...........	63,980,000	
Shipped over the P. &. E. R. R................	54,890,000	
Total amounts of shipments in 1873		159,884,029

1872.

From January 1, 1872, to July 8, 1872, the shipments were as follows:		
Shipments over the West Branch canal........	40,793,007	
Shipments over the Catawissa railroad.........	30,151,614	
Shipments over the P. & E. R. R.......... ...	25,249,541	
Total amount of shipments in 1872........		96,194,162
Increased shipments in 1873........................		63,689,867

STOCK ON HAND JANUARY 1, 1873.

Amount of manufactured lumber on hand in Williamsport and Lock Haven, January 1, 1873, as furnished officially to the Lumberman's Exchange..............................	170,588,648

Logs rafted out of the Williamsport and Lock Haven booms from January 1, 1873, to July 8, 1873, as follows:

	Feet.	Feet.
Out of Susquehanna boom, 433,423 logs, scaling,	86,698,969	
Out of West Branch boom, 82,764 logs, scaling,	15,169,250	
Total amount of logs rafted out of both booms in 1873..................................		101,868,219
In the year 1872, during the same time, logs were rafted out as follows:		
Out of Susquehanna boom, 519,732 logs, scaling,	101,143,953	
Out of West Branch boom, 105,135 logs, scaling,	20,050,964	
Total amount of logs rafted out of both booms in 1872..................................		121,194,917
A decrease in 1873 of..........		19,326,698

By the foregoing statement it will be observed that the increased shipments for the six months ending July 8, 1873, have been carried as follows:

	Feet.
By the Catawissa railroad	33,828,386
By the P. &. E. R. R	29,640,459
By the West Branch canal	221,022

All which is respectfully submitted,

P. B. MERRILL,
F. E. EMBICK, *Sec'y,*
Committee.

SUSQUEHANNA BOOM.

OFFICE GAZETTE AND BULLETIN,
Williamsport, August 5, 1873.

As several errors have crept into our report of the amount of logs rafted out of the booms from time to time, we publish to-day a review of all the bills of logs and the dates, with the corrections. The table will be found valuable for reference:

No. bills.	FOR WEEK ENDING.	No. Logs.	No. Feet.
1	Friday, May 2, 1873	45,850	9,000,842
2	Friday, May 16, 1873	39,478	7,800,944
3	Friday, May 23, 1873	51,187	10;126,099
4	Friday, May 30, 1873	65,989	13,344,270
5	Friday, June 6, 1873	63,435	12,902,710
6	Friday, June 13, 1873	53,968	10,771,121
7	Friday, June 20, 1873	51,942	10,395,183
8	Friday, June 27, 1873	28,318	5,571,617
9	Friday, July 4, 1873	49,654	9,916,647
10	Friday, July 11, 1873	58,368	11,039,933
11	Friday, July 18, 1873	86,012	17,246,293
12	Friday, July 25, 1873	81,941	17,016,740
13	Friday, Aug. 1, 1873	76,980	16,367,277
		753,122	151,499,676

LOWER BOOM.

No. bills.	FOR WEEK ENDING.	No. Logs.	No. Feet.
1	Friday, May 16, 1873	5,276	1,045,748
2	Friday, May 23, 1873	1,986	395,529
3	Friday, May 30, 1873	5,221	1,055,898
4	Friday, June 6, 1873	8,635	1,815,508
5	Friday, June 13, 1873	8,149	1,724,534
6	Friday, June 20, 1873	4,318	813,012
7	Friday, July 11, 1873	14,829	3,152,771
8	Friday, July 18, 1873	5,414	1,159,442
9	Friday, July 25, 1873	4,626	1,029,521
		58,454	12,191,963

RECAPITULATION.

Rafted out of upper boom	151,499,676
Rafted out of lower boom	12,191,963
Total	163,691,639

The Muncy boom is not counted in the operations at Williamsport.

MUNCY BOOM.

No. bills.	FOR WEEK ENDING.	No. Logs.	No. Feet.
1	Friday, June 13, 1873	5,896	1,162,027
		2,115	395,032
		8,011	1,557,059

At this time last year the amount rafted out of the boom was as follows: Logs, 560,914; feet, board measure, 109,839,974. Thus far the operations of 1873 show an increase over last year of 250,662 logs and 53,851,665 feet.

WILLIAMSPORT LUMBER SHIPMENTS.

The following comparative statements furnish a general exhibit of the lumber trade from August, 1873, to July, 1874:

August 6, 1873—The total shipment for 1872–3 when compared, show an increase up to this time of 48,759,642 feet.

August 21, 1873—The rains and freshets of the past week have operated against shipments. The river reached a height of thirteen and one half feet above low water, and it is estimated between six and eight million feet logs passed below. Such an event was expected, as the number of logs outside the boom was supposed to reach near twelve million feet. This loss falls heavily upon three or four of our lumbermen We understand but few logs were caught either at Muncy or Northumberland, the booms at those points failing to hold the logs. The loss will probably be two-thirds the amount escaping.

September 9, 1873—As compared with the week ending September 10, 1872, there is an increase of 402,237 feet, the shipments, being as follows: Catawissa, 1,905,200 feet; Philadelphia and Erie, 1,011,560 feet, and the canal 2,339,003 feet.

Lock Haven shipped from August 30 to September 6, 1873, 33 cars, containing 297,240 feet, a decrease of 19,240 feet as compared with the week ending August 30; from points east of Renovo there were 54 cars, containing 463,440 feet, being an increase of 134,040 feet; from stations on the Northern Central there were 43 cars, containing 388,400 feet, an increase of 241,760 feet, making the total shipments over the Philadelphia and Erie road, from all points, for the week, 2,801,000; over the Catawissa, 2,479,080; by canal, 1,527,000; a grand total of 6,807,080 feet, and a decrease of 1,115,260 as compared with last week.

October 8, 1873—The shipments from Williamsport for the week ending October 4, are 314,680 feet in excess of the week previous, as follows: Catawissa gains 100,640 feet, the canal 671,000 feet, while the Philadelphia and Erie falls off 456,960 feet.

For the week ending October 8, 1872, the Catawissa shipped 1,565,400 feet, the Philadelphia and Erie 685,400 feet, and the canal 2,053,000 feet—a total of 4,303,800 feet. The week ending October 4, 1873, shows the following: Catawissa 2,523,720 feet, Philadelphia and Erie 1,327,800 feet, and the canal 2,540,000 feet—a total of 6,391,520 feet, and a gain over last year's corresponding week of 2,087,700 feet.

The total shipments over the Philadelphia and Erie road, including Williamsport, 2,159,040 feet; over the Catawissa, 2,523,720 feet—a total by rail of 4,682,760 feet, and a decrease as compared with last week of 452,120 feet.

For the month of September, 1872, the following were the shipments: Catawissa 7,259,400 feet, Philadelphia and Erie 4,455,820 feet, and canal 9,862,763 feet—a total for the month of 21,577,983 feet. In September, 1873, the total shipments from Williamsport were 26,565,000 feet, an increase over 1872 of 4,987,017 feet, as follows: Catawissa 11,754,680 feet, a gain of 4,495,280 feet; Philadelphia and Erie 7,048,320 feet, a gain of 2,592,500 feet; canal 7,762,000 feet, a decrease of 2,060,763 feet.

October 20—The shipments of lumber from Williamsport for the week ending October 11, 1873, show a decrease of 1,742,320 feet, as compared with the previous week, there being a decline over the Catawissa of 534,760 feet; over the Philadelphia and Erie of 189,560 feet, and by canal of 1,018,000 feet.

For the week ending October 15, 1872, the Catawissa shipped 1,539,800 feet; the Philadelphia and Erie 653,320 feet, and the canal 2,639,473 feet—a total of 4,832,593 feet. For the week ending October 11, 1873, the Catawissa shipped 1,988,960 feet; the Philadelphia and Erie 1,138,240 feet, and the canal 1,522,000—a total of 4,649,200 feet, and a loss, when compared with the corresponding week in 1872, of 183,393 feet.

The total shipments of lumber over the Philadelphia and Erie road, from all points, passing through Williamsport, and weighing at this point, is 1,929,760 feet, and over the Catawissa 1,988,960 feet—a total of 3,918,720 feet, and as compared with last week a decrease of 764,040 feet.

The perceptible decline in shipments the past two weeks clearly shows the effect the financial crisis has had upon our lumber interests, and yet, when compared with 1872, we have shipped 55,138,723 feet over last year's business up to the same date, and will probably reach the business of 1871, when the shipments were 250,000,000 feet.

October 30—Shipments from this city and points above this still continue to decline. A few of our mill's are cutting down" in the number of employees, and the outlook for the winter is not the most pleasant to contemplate.

For the week ending October 25, 1873, the lumber shipments from Williamsport were 3,992,560 feet, showing a decrease when compared with the previous week, of 820,540 feet, as follows: The Catawissa shows a decline of 428,340 feet, the Philadelphia and Erie, 274,700 feet, and the canal, 117,500 feet,

For the week ending October 29, 1872, the shipments from Williamsport were 4,584,880 feet; for the week ending October 25, 1873, the shipments are a total of 3,992,560 feet, and a loss, when compared with the corresponding week in 1872, of 592,320 feet.

The shipments of lumber passing through Williamsport for the week ending October 25, 1873, are a grand total of 4,601,640 feet.

Nov. 28—A few of our mills are running, but generally they are closed up until the spring opening. Shipments by canal have virtually closed, no boats having left this port since the 22d, although a few are "breaking" their way home to winter quarters. There will be some addition to the canal shipments from the outlet lock at Loyalsock, from August 1, to date.

For the week ending November 22, 1873, the shipments from Williamsport were 3,115,160 feet, a decrease of 217,840 feet, as compared with the previous week, as follows: The Catawissa gains 143,450 feet, while the Philadelphia and Erie shows a decrease of 123,320 feet, and the canal of 238,000 feet.

For the week ending November 23, 1872, the shipments from Williamsport were—a total of 5,818,440 feet. For the week ending November 22, 1873—a total of 3,115,160 feet—and a decrease when compared with the corresponding week in 1872 of 2,703,280 feet.

The total shipments of lumber passing through Williamsport for the week ending November 22, 1873, were 3,585,480 feet, showing a decrease of 186,440 feet as compared with last week.

Dec. 6—With the canal closed, the mills shut down, and the financial crisis upon us, we can only look for limited shipments until the spring trade opens.

The shipments over the Catawissa railroad from January 1, 1872, to December 1, 1872, were 67,818,342 feet; from January 1, 1873, to December 1, 1873, 101,737,920 feet; showing an increase thus far over the year 1872, of 33,919,578 feet.

From January 1, 1872, to December 1, 1872, the Philadelphia and Erie railroad shipped from Williamsport 44,729,053 feet, and for the same period in 1872, 66,341,320 feet, an increase of 21,612,267 feet.

The canal shipped in 1872, 72,386,658 feet, while in 1873, the shipments are 66,124,329 feet—showing a decrease for the year of 6,262,329 feet.

For the week ending November 29, 1873, the shipments from Williamsport were 2,023,960 feet, a decrease of 1,091,200 feet as compared with last week. This decrease is largely owing to the closing of the canal.

For the week ending November 30, 1872, the shipments from Williamsport were—a total of 2,575,640 feet. For the week ending November 29, 1873—a total of 2,023,960 feet—and a decrease as compared with the corresponding week in 1872, of 551,680 feet.

The total lumber shipments passing through Williamsport, for the week ending November 29, 1873, were as follows: Over the Catawissa railroad, 1,236,720; over the Philadelphia and Erie, 1,270,480 feet—a total of 2,507,200 feet, and a decrease of 1,078,280 feet, as compared with last week.

Jan. 15—Thus far the season has been very unfavorable to our lumbermen, and log jobbers have been laboring under great disadvantages. At this time it is difficult to give anything like an approximation to the amount of logs that will be cut and floated to this market—much depends upon "the weather" from this until the spring opening. As our lumbermen resolved to "put in" only about two-thirds of last year's stock, it is fair to presume that 200,000,000 to 250,000,000 feet will cover that item.

Feb. 5—Shipments from this point continue largely in excess of previous years at this season. In January, 1873, there were 519 cars forwarded over the Catawissa railroad, containing 4,620,500 feet; and over the Philadelphia and Erie road 277 cars were forwarded, containing 2,576,740 feet—a total from Williamsport of 796 cars and 7,197,240 feet of lumber.

In 1874, the shipments for the month of January, were 12,430,400 feet—an increase over 1873 of 5,233,160 feet.

For the week ending January 31, 1874, Williamsport shipped a total of 3,672,680 feet. In 1873, for the week ending February 1, a total of 1,861,940 feet, and 1,810,740 feet less than for the corresponding week in 1874.

Lock Haven shipped 46 cars up to January 24, 1874, containing 441,240 feet; and for the week ending January 31, 1874, 15 cars, containing 146,040 feet—a total for the year of 61 cars and 587,280 feet of lumber.

From points east of Renova there have been 50 cars forwarded in January, 1874, containing 465,480 feet of lumber; of these there were 11 cars, containing 103,240 feet, for the week ending January 31, 1874.

April 2—The past week has been one of more than usual activity in the lumber trade.

The canal first opened for the passage of light boats on the 23d and on the 25th the first lumber shipments were made.

During the week ending on the 28th ult., the lumber shipments were brisker than the previous week, 6,748,039 feet having gone forward, which is an increase of 750,121 feet. This however, was caused by the opening of the canal, as the shipments by rail show a falling off, compared with the previous week, of 29,700 feet.

On the 25th, 81 cars were shipped by the Philadelphia and Erie railroad from Williamsport, which is the heaviest day's work yet done here this season. They carried 507,240 feet.

April 9—Owing to the low stage of the river during the past week there has been no rafting, and the log drives remain "hung up" in the tributary streams, much to the disadvantage of the lumbermen. There is probably less than thirty millions in the boom, and a rise in the river is anxiously looked for to bring down a sufficiency of logs to enable the manufacturers to run their mills on full time. More than half of the mills are now in operation, working up the stock that remained in their pools over winter.

Last year the first shipments by canal were made on the 2d of May, nearly one month later than this year, and the traffic of that week footed up 2,075,000 feet.

May 7—The shipments of lumber from Williamsport for the week closing on the second of May show a total of 8,583,952 feet, an increase of 3,006,906 feet over the previous week

The mills are nearly all running, and there is an abundant stock in the boom.

June 19—There is a slight improvement in the lumber market since our last report, the shipments for the week closing on the 13th showing a total of 6,290,063 feet, an increase of 1,383,629 feet over the previous week.

July 9—For the week closing on the 4th of July the shipments of lumber from Williamsport, by rail and canal, foot up a total of 4,903,966, an increase of 211,135 feet over the week ending on the 27th of June.

The total shipments during the months of May and June compare as follows :

Total shipments in May	26,123,655
Total shipments in June	23,144,021
Decrease in June	2,979,634

ANNUAL LUMBER REPORT.

ESTIMATE OF LUMBER IN THE WILLIAMSPORT MARKET, JANUARY 1, 1874, AS FURNISHED OFFICIALLY TO THE WEST BRANCH LUMBERMAN'S EXCHANGE.

YARDS.	PINE.	HEMLOCK.	LATH.	PICKETS.
Eder, Housel & Deemer	6,647,602	265,800	1,050,000	40,000
TenEyck, Emery & Co	9,200,000		1,400,000	
Reading, Fisher & Co	7,000,084		1,200,000	2,800
P. B. Merrill & Co	8,231,442		2,000,000	
Taber & Goodrich	1,100,000	3,800,000	870,000	
Barrows, Bowman & Co	8,872,835		1,700,000	124,000
G. W. Quinn	3,100,000		480,000	120,000
Filbert, Otto & Co	7,000,000		1,175,000	150,000
Canfield & Colton	5,790,000	1,375,000	800,000	
Thompson, Harper & Co.	8,936,282	1,244,991	3,528,300	179,500
B. H. Taylor & Son	7,000,000	1,000,000	2,500,000	150,000
F. Coleman	2,275,274		4,204,900	146,200
Beaver Mills and Lumber Company,	19,411,726		3,829,600	190,000
John DuBois	10,000,000	2,250,000	1,300,000	
Brown, Earley & Co	11,117,286		2,131,000	371,520
Wolverton & Tinsman	8,100,000		1,500,000	
P. G. Fessler & Co	5,069,711	550,000	950,000	
Finley, Young & Co	9,957,700		3,500,000	136,800
Merriman & Foresman	6,515,000		1,509,900	509,370
White, Lentz & White	10,272,506		2,709,300	383,420
Starkweather & Munson	7,800,000		1,110,000	
Lutscher & Moore		4,000,000		600,000
Dodge, James & Stokes	27,433,258	3,112,980	12,946,700	349,045
Hunt & Edler	1,273,216	1,695,673	438,600	35,000
C. H. Krouse & Co.	5,158,000	278,000	2,068,700	
S. N. Williams and others, on P. Herdic & Co.'s yard	10,000,000		2,639,100	
Slonaker, Howard & Co	3,700,000	300,000	1,000,000	100,000
Total, Williamsport	220,961,922	19,872,444	58,541,100	3,587,655
Do. . Lock Haven	34,919,444	3,460,652	4,905,000	1,476,000
Do. . Baltimore	1,350,000			
Do. . Port Deposit	5,200,000		600,000	45,000
Do. . Philadelphia	9,027,948			
Total, January 1, 1874	271,459,314	23,333,096	64,046,100	5,108,655

COMPARATIVE STATEMENT.—STOCK ON HAND, JANUARY 1, 1873.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	137,949,907	8,807,440	39,966,700	2,273,280
Lock Haven	32,638,741	1,930,000	5,163,000	1,503,000
Baltimore	2,000,000			
Port Deposit	4,000,000			
Philadelphia	10,818,990			
Total, January 1, 1873	187,407,638	10,737,440	45,129,700	3,776,280
Do. . . . . . do. 1874	271,459,314	23,333,096	64,046,100	5,108,655
Difference	84,051,676	12,595,656	18,916,400	1,332,375

STOCK ON HAND, JANUARY 1, 1872.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	50,550,603	2,832,500	12,687,600	1,687,815
Lock Haven	7,179,000		710,000	410,000
Baltimore	2,250,000			
Port Deposit	5,250,000			
Philadelphia	13,486,280			472,890
Total, January 1, 1872	78,715,883	2,832,500	13,397,600	2,570,705
Do......do.....1874	271,459,314	23,333,096	64,046,100	5,108,655
Difference	192,743,431	20,500,596	50,648,500	2,537,950

STOCK ON HAND, JANUARY 1, 1871.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	122,505,694	5,737,000	33,604,800	2,646,150
Lock Haven	22,312,000		2,289,000	720,000
Baltimore	3,000,000			
Port Deposit	950,000			
Philadelphia	10,249,971			245,133
Total, January 1, 1871	159,017,665	5,737,000	35,893,800	3,611,283
Do......do.....1874	271,459,314	23,333,096	64,046,100	5,108,655
Difference	112,441,649	17,596,096	28,152,300	1,497,372

STOCK ON HAND, JANUARY 1, 1870.

	PINE.	HEMLOCK.	LATH.	PICKETS.
Williamsport	134,166,157	6,098,000	27,627,300	1,653,065
Lock Haven	58,500,000			
Baltimore	3,500,000			
Port Deposit	1,500,000			
Philadelphia	11,000,000			
Total, January 1, 1870	208,666,157	6,098,000	27,627,300	1,653,065
Do......do.....1874	271,459,314	23,333,096	64,046,100	5,108,655
Difference	62,793,157	17,235,096	36,418,800	3,455,590

The above is a correct statement of the amount of Susquehanna lumber, lath and pickets in first hands, in the above named markets, on the first day of January, 1874.

F. E. EMBICK,
Secretary.

LUMBER IN PENNSYLVANIA.

The following is the report of G. W. Lentz, Esq., of Williamsport, of the Committee on Lumber Statistics, made to the Lumbermen's Convention, recently held in Saginaw It is the result of careful investigation, and shows the quantity of standing white pine, hemlock and hard wood timber, east and west of the Allegheny mountains, in this State :

	Feet.
On Pine creek and its branches	300,000,000
On Youngwoman's creek	130,000,000
On Kettle creek and its branches	75,000,000
On Cook's run	15,000,000
On Hunt's run	75,000,000
On First forks of the Sinnemahoning and branches	50,000,000
On Bennett's branch of the Sinnemahoning and branches	30,000,000
On Anderson's creek and branches	150,000,000
On Susquehanna river and small branches	300,000,000
On Clearfield creek and branches	100,000,000
On Moshannon creek and branches	100,000,000
On Driftwood and branches of Sinnemahoning	50,000,000
On Musquito creek, below Clearfield	225,000,000
On Wickoff run	60,000,000
On Baker and other runs	75,000,000
On Beech creek, &c	50,000,000
Other small streams additional	515,000,000
Total on streams east of Alleghenies	2,600,000,000
Total on streams west of Alleghenies	1,000,000,000
Making a sum total of standing white pine east and west of the Allegheny mountains	3,600,000,000
Total amount of hemlock in Pennsylvania	7,000,000,000
Total amount of hard wood in Pennsylvania, fit for saw-logs,	4,000,000,000

CALIFORNIA LUMBER TRADE.

The following review of the lumber trade of San Francisco, California, may be interesting:

EXPORTS.

The lumber exports from January 1, 1873, to January 1, 1874, were as follows:

TO	Feet.	Value.
Tahiti	1,756,841	$31,846 00
Mexico	1,056,071	22,869 00
Panama	748,081	19,752 00
Central America	1,625,136	33,612 00
Australia	2,431,920	57,259 00
Russian Asia	345,458	8,677 00
China	1,106,808	20,250 00
Iquique	1,228,715	21,673 00
Eten, Peru	154,198	4,400 00
Callao	2,956,912	59,394 00
Navigator's Island	460,680	7,803 00
Honolulu	1,041,000	12,320 00
Liverpool	2,820	99 00
Victoria	82,554	2,985 00
Valparaiso	2,973,135	40,974 00
Molendo	326,579	5,720 00
Japan	18,270	427 00
Totals, 1873	17,415,287	350,024 00
Totals, 1872	16,517,171	309,325 00
Totals, 1871	17,590,854	312,570 00

RECEIPTS.

Statement of receipts of lumber, &c., at San Francisco, from January 1 to December 31, 1873:

	Feet.	Feet.
Puget Sound and Oregon pine—Rough	92,568,512	
Dressed	12,805,566	
Fencing	12,017,373	
Pickets	48,353	
		117,439,804
Spruce—Rough	7,793,197	
Dressed	342,274	
		8,135,471
Cedar, rough		2,262,333
Laurel and maple		146,410
Redwood—Rough	38,797,676	
Rough, clear	5,372,044	
Dressed, clear	21,430,775	
		60,600,495
Carried forward		188,584,513

	Feet.	Feet.
Amount brought forward		188,584,513
Redwood—Dressed, ½ inch	377,308	
Siding, ½ inch	1,381,456	
Battens, ½ inch	418,446	B. M.
		1,088,605
Pickets—Rough	978,380	
Dressed	515,892	
		1,492,272
Railroad ties	2,107,349	
Telegraph poles	333,392	
		2,440,741
Sugar pine, rough		4,723,310
Total		203,329,441
Total, same time in 1872		236,868,900

	Feet.
Foreign shipments made direct from mill ports, in 1872, estimated at	95,000,000
Against same in 1873	50,000,000

SUNDRIES.

Shingles	60,228,750
Laths	27,258,503
Ship knees, pieces	1,553
Piles, lineal feet	542,253
Redwood posts	750,854
Broom handles, pieces	123,500
Spanish cedar logs, pieces	5,355
Railroad ties, rift, pieces	240,932
Ship spars, lineal feet	3,875
Ship spars, pieces	73
Poles, lineal feet	2,022
Poles, pieces	136
Lignum vitæ, pieces	62
Rosewood, pieces	261
Rosewood, tons	66
Primever wood, pieces	44

DRAINAGE OF PENNSYLVANIA.

DRAINAGE AREA OF THE SEVERAL COUNTIES OF PENNSYLVANIA.

The respective river basins, included in Pennsylvania, are of very unequal extent. Delaware, Susquehanna and Ohio include an immense proportion of the whole State, and sub-divide it naturally into the eastern, middle and western river sections.

The following table give the respective areas of each, and also the smaller sections of the Potomac, Genesee and Erie :

Delaware river drains the counties of

	Sq. miles.	Acres.
Berks	920	588,800
Bucks	605	387,200
Carbon	400	256,000
Chester, three-fourths	550	354,240
Delaware	177	113,280
Lebanon, one-eighth	38	24,480
Lehigh	364	232,960
Luzerne, one-tenth	140	89,600
Montgomery	472	303,080
Monroe	600	384,000
Northampton	375	240,000
Philadelphia	126	80,640
Pike	600	384,000
Schuylkill, three-eighths	285	304,000
Wayne, three-fourths	719	460,800
	6,371	4,203,080

Susquehanna drains the counties of

	Sq. miles.	Acres.
Adams, three-fifths	316	202,752
Bedford, three-fifths	596	381,696
Blair	594	380,160
Bradford	1,174	751,360
Cambria, two-fifths	268	171,520
Cameron	407	260,480
Centre	1,075	688,000
Chester, one-fourth	184	118,080
Clearfield, nine-tenths	1,070	685,440
Clinton	924	591,360
Columbia	431	275,840
Cumberland	544	348,160
Dauphin	559	357,760
Elk, one-fourth	174	111,680
Franklin, one-third	229	160,000
Fulton, one-fourth	105	67,200
Huntingdon	840	537,600
Indiana, one-tenth	77	49,280
Juniata	351	224,640
Lancaster	950	608,000
Lebanon, seven-eighths	266	171,360
Luzerne, nine-tenths	1,260	806,400
Lycoming	1,080	691,200
M'Kean, one-fourth	280	179,200
Mifflin	370	236,800
Montour	148	94,720
Northumberland	457	292,480

SUSQUEHANNA—*Continued.*

	Sq. miles.	Acres.
Perry	539	344,960
Potter, five-eighths	665	428,400
Schuylkill, three-eighths	475	182,400
Snyder	293	187,520
Susquehanna	797	510,080
Sullivan	433	275,200
Tioga	1,116	714,240
Union	258	165,120
Wyoming	409	261,760
York	900	576,000
	20,604	13,088,848
Genesee drains		
Potter, one-eighth	138	85,680
Potomac drains		
Adams, two-fifths	220	135,168
Bedford, two-fifths	398	254,464
Franklin, two-thirds	525	319,000
Fulton, three-fourths	315	201,600
Somerset, one-sixth	180	115,200
	1,638	1,025,432
Lake Erie drains		
Erie, one-half	375	240,000
Ohio river drains		
Allegheny	754	482,560
Armstrong	639	408,960
Beaver	466	298,240
Butler	785	502,400
Cambria, three-fifths	402	257,280
Clearfield, one-tenth	120	76,160
Clarion	600	384,000
Crawford	984	629,760
Elk, three-fourths	524	335,040
Erie, one-half	375	240,000
Fayette	824	527,360
Forest	445	284,800
Greene	608	389,120
Indiana, nine-tenths	693	443,520
Jefferson	645	412,800
Lawrence	358	229,120
M'Kean, three-fourths	840	537,600
Mercer	650	416,000
Potter, one-fourth	268	171,360
Somerset, five-sixths	888	567,040
Venango	516	330,240
Warren	861	551,040
Washington	896	573,440
Westmoreland	1,050	672,000
	15,191	9,719,840
SUMMARY.		
Delaware drains	6,371	4,203,080
Susquehanna drains	20,604	13,088,848
Genesee drains	138	85,680
Potomac drains	1,638	1,023,432
Lake Erie drains	375	240,000
Ohio drains	15,191	9,719,840
Total	44,317	28,362,880

TANNERIES AND LEATHER.

THE FORESTS OF PENNSYLVANIA.

In speaking recently of the condition and progress of American agriculture we incidentally alluded to the vast extent of unimproved land in Pennsylvania, and cited the number of acres of woodland in a few counties. This subject is worthy of a more extended notice, as the public has been entertained of late with voluminous efforts to get up a scare about the destruction of our forests. Leaving other States to look after their part of the case to suit themselves, we confine our attention for the present to our own. The unimproved land in Pennsylvania is distinctly classified as that which is woodland, and that which is not. There is, therefore, no room for guesswork. Taking first the counties along the northern border they show the following number of acres of woodland: Wayne, 158,892; Susquehanna, 148,789; Bradford, 204,992; Tioga, 148,153; Potter, 87,329; M'Kean, 48,177; Warren, 131,214; Erie, 126,627. This is but a single range of counties extending along the border of the great and populous State of New York.

Now let us look at the counties on or near the Ohio border: Crawford, 184,436; Mercer, 105,289; Venango, 96,167; Lawrence, 49,500; Butler, 157,247; Beaver, 71,849; Allegheny, 89,050; Washington, 113,404; Greene, 106,720. These counties adjoin what passes for a prairie State. Next let us look at the southern border: Fayette, 136,027; Westmoreland, 139,316; Somerset, 237,229; Bedford, 199,569; Fulton, 87,554; Franklin, 75,448; Huntingdon, 179,107; Cumberland, 33,909; Adams, 56,133; York, 110,139; Lancaster, 65,413; Chester, 62,161; Delaware, 10,105; Philadelphia, 2,117. It will be seen that even in the limits of this great city there are over two thousand acres of unimproved forest land. Turning over to the New Jersey border we have the following array: Montgomery, 22,310; Bucks, 39,814; Lehigh, 32,367; Northampton, 14,955; Carbon, 26,499; Monroe, 65,470; Pike, 88,065; Wyoming, 57,840. This shows that the only line of counties where the forest is greatly reduced is the one nearest New York city where the operations of the tanneries of that city are carried on, and that beyond that line they appear to have known nothing at all of the forests of the Commonwealth, yet have assumed that the scarcity in their tract was characteristic of the whole country.

In order that it may be seen how unjust it is to assume that any such scarcity is general we subjoin a statement of the unimproved woodland in various central and interior counties: Indiana, 159,181; Jefferson, 107,425; Clearfield, 129,536; Clarion, 95,394; Cambria, 133,979; Armstrong, 121,756; Cameron, 61,216; Juniata, 65,929; Columbia, 66,245; Dauphin, 57,788; Perry, 104,240; Schuylkill, 60,876; Lycoming, 110,689; Berks, 70,932; Luzerne, 127,600; Centre, 39,129. In fact there is no region anywhere better supplied with forest, than Pennsylvania, or were the woodland is so well distributed or so little likely to be exhausted. A very large part of this forest is so rugged and mountainous, and so covered with rocks and stones that it cannot be cultivated, and will therefore always remain.

The trees constitute a regular crop, and all that is required is that some effort should be made to guard against waste by desolating fires.

The maintenance of so much land in a state of nature favors the diversification of pursuits. Thus, of the population of Pennsylvania, 356,240 are engaged in mining and manufactures; 121,253 in trade and transportation; 283,000 in professional pursuits, and 260,051 in agriculture. We have thus the strange spectacle of 27.73 per cent. of the population being sustained by professions and only 25.48 by agriculture. In Massachusetts only 12.55 per cent. are engaged in agriculture, and 50.47 in manufactures. The two pursuits sustained by the forests are tanneries and lumbering. As regards the former, there are in the State about 900 establishments, with a capital of $12,000,000, and a yearly business of $40,000,000. Their annual capacity is about 316,000 hides, and the products of last year amounting to about 300,000, two-thirds of the hides being domestic and one-third South America. The tanning capacity of the State, however, judging by the general diffusion of the woodland, is far beyond these figures, and is scarcely understood even by its own people. Our belief is that the tanning capacity of the State is fully equal to a million hides a year.

As regards the lumbering business we have only the report of the Susquehanna trade, and none from any of the other regions. The Susquehanna stock on hand January 1, 1873, amounted to 187,407,638 feet pine, 10,737,440 feet hemlock, 45,129,700 feet lath, and 3,776,280 feet pickets. Williamsport is the great depot of trade. To show the diffusion of the tanning and lumber interests, we take from the census of 1870 the statistics of leather tanned and lumber sawed in remote counties, given in values:

	Leather tanned.	Lumber Sawed.
Snyder	$48,031 00	$201,000 00
Allegheny	1,276,305 00	1,067,353 00
Somerset	87,388 00	171,760 00
Crawford	146,082 00	704,033 00
Sullivan	216,600 00	19,160 00
Susquehanna	1,179,380 00	110,230 00
Erie	282,042 00	395,765 00
Tioga	555,020 00	550,829 00
Warren	908,135 00	1,115,696 00
Union	29,617 00	165,400 00
Pike	266,338 00	129,700 00
Schuylkill	169,162 00	257,220 00
Northampton	340,070 00	172,795 00
Northumberland	181,966 00	695,450 00
Perry	332,041 00	59,277 00
Huntingdon	707,215 00	40,065 00
Montgomery	106,367 00	52,870 00
Lycoming	230,906 00	5,173,796 00
Monroe	1,146,014 00	286,956 00
Mifflin	260,202 00	31,120 00
Mercer	75,009 00	325,090 00
Luzerne	1,105,424 00	1,466,987 00
Lehigh	474,324 00	53,540 00
Lancaster	362,374 00	189,080 00
Juniata	243,706 00	16,980 00

TRAINING SCHOOL FOR TANNERS.

At the last Tanners' Convention, held at Harrisburg, Pa., this subject was introduced, and seemed to meet with favor. Before any definite action, however, is taken, it seems desirable that we get clearly before our minds not only the end we propose to attain, but the means which are to be used for its accomplishment.

It will be conceded that there is need enough for instruction, but it may not be quite so clear that theoretic instruction will be of service, for, no doubt, it will be insisted that all information obtained otherwise than by practically working in a tannery "mere theory," and is of doubtful utility. We all know that such views as these have been entertained, and we must expect to meet them again. But we should remember, for our encouragement, that only a few years ago "book learning" was rejected by our farmers, while, now, no farmer thinks of getting along without the aid of an agricultural journal. It is conceded that *tanning is a chemical operation*, by which hides are converted into leather. Why, then, should not the tanner be made acquainted, as far as possible, with the laws of this union of gelatin and tannin? It is no answer to say that the tanner learns this practically after years of experience. It is desirable that the young man should start out with this capital. It gives him just so much the advantage in his professional career. But it is not true that tanners generally acquire the requisite chemical knowledge by experience. There is no doubt that tanners have considerable practical knowledge, and by the application of this experience do make very creditable leather. But whether this leather product is made with as much *economy* as would be possible, if a more thorough and enlightened system prevailed, is quite another question, and one which our English friends would not take long to answer, if they should inspect our wastful methods. As an illustration of the advantages of some slight chemical knowledge, it may not be amiss to state a fact within the knowledge of the writer.

About thirty years ago a tanner of this State, of more than average intelligence, was tanning a very large number of North Sea sealskins—indeed, had turned his whole capacity into this description of stock. He soaked and unhaired these skins, for more than two years, precisely as he had formerly done his calfskins. Almost by an accident he discovered that warm water would greatly aid the process of freeing the skins from the grease with which they were covered, and even this did not occur to him until he saw his men resorting to *warm* water instead of *cold* to clean their hands. But then he saw his men use *soap* besides the warm water, and the further thought occurred to him that, if he could employ soap, or its equivalent, possibly he could make a further saving, and a little inquiry and thought brought him into the use of the soda ash or potash of commerce; the result was that he worked in his sealskins with less than half the labor he had been previously using. Just at this time, if a proposition had come to him to have his son join a class to study chemistry as applied to the tanner's art, the writer of this would have had much more reliable and valuable information to impart.

A careful analysis of many of the improved methods of softening dry hides will show that an alkali of some kind is used, the object and effect of which is to cut the grease, and thus allow the water a freer access to the pores of the hide. This is so simple that most tanners will say that they have always known and have in their experience used an alkali; but on a close inquiry it will be found that no intelligent use has been made of this most useful and labor-saving chemical by our tanners. Much use has of late been made of vitriol in the process of plumping the hide while in a green state; but, as compared with the English tanners, we make but a poor use of this acid. As our tanners have been and are now using this mineral acid, it is very doubtful whether we are benefited by its use.

With the aid of a more thorough knowledge, both of the acid used and the gelatin to be operated upon, we may hope in the near future to so improve our methods as to use acids of some kind to plump our sole leather, but not the vitriol of commerce now so generally in use

Many of the defects of our present system, such as the "black rot," "white spots," and the general discoloration of grain by the drying process, may be avoided by proper study and reflection. But why attempt the enumeration of the advantages to be secured by a thorough knowledge of the "chemistry of tanning?" Without such knowledge, either in a practical or theoretical form, leather cannot be made. With these forms of knowledge joined, a much better result can be attained. Then why should not the tanners of America avail themselves of these helps?

The truth should be acknowledged that, beyond a mere form of manipulation into which our tanners have fallen, they know but little about the tanner's art, and it is this deficiency which has made it difficult, if not impossible, for us to contend with our English competitors. How shall this instruction be obtained?

No one supposes that old and so-called experienced tanners will fall away from their errors, and "go to school." But they may have sons whom they may wish to have follow their profession, and they may have struggled so hard in the rough and unskilled methods as to be willing to send their sons to a course of instruction which would shorten up at least their road to the happy goal to which their fathers have arrived.

It was with this hope, and in that belief, that the suggestion was made that a practical chemist should be employed, and, after he had prepared himself fully to apply his chemical knowledge to the art of tanning, that a class of young men who propose to devote themselves to this calling should be procured, and a thorough and systematic course of instruction be given them, with such experiments and practical tests as would really occur to a competent instructor.

Of course at the beginning there would be difficulties to overcome, both in procuring students and in securing the requisite teacher; but as time passed these difficulties would be obviated, and possibly such a practical university as Mr. Cornell has inaugurated might adopt tanning as one of the applied arts. For the present it has been suggested that Harrisburg should be the location, and there seems an appropriateness in this location which will be generally recognized.

Mr. Peter Cooper, many years ago, offered his institution and its full equipment to teach chemistry, but it was thought then, as now, that there are advantages in a country location that far outweigh those offered by Mr. Cooper in New York city. The class should be in the immediate neighborhood of, or in actual contact with a tannery, where the practical experiments and their results could be observed.

It is not unreasonable to anticipate that the day will arrive when a small model tannery could be worked by the class. This course of instruction could be more or less complete, according to the advanced condition of the pupil on entering, or the disposition of the latter to make himself proficient in his calling, and, to a reasonably intelligent and fairly educated youth of sixteen to eighteen years, a course of instruction lasting through a single term of three months would send him home with many useful ideas, from which, if afterward applied—as no doubt would be the case—practically, the most satisfactory results might be anticipated.

As a further means of rendering these investigations serviceable, the trade journals would always be glad to publish the result of any experiments, and open their columns for the discussion of all topics which would tend to throw light upon the different problems of the trade. It may be that this whole scheme is chimerical; if so, those whose interests are to be affected will discover it, and govern themselves accordingly.

BOOT AND SHOE BUSINESS OF PHILADELPHIA, 1873

In reviewing the business of the past year, we find the most important points of interest of which to make mention have been the large demand for children's and infants' shoes, a greatly increased production of goods for men's and boys' wear, and a much heavier business done by the auction houses.

MANUFACTURERS OF WOMEN'S AND CHILDREN'S GOODS.

The trade of the year among the manufacturers of medium and fine goods for ladies' and misses' wear has been a variable one. The year opened with encouraging prospects for an early and fair demand, but as the season progressed it became more or less fitful; some weeks a very active trade was realized, while others were far less encouraging. The causes of the unsatisfactory trade during the spring were: the long continued winter, in which heavy boots or rubbers had been chiefly worn, thereby causing many goods adapted to the early spring trade to be still on hand; a smaller volume of money circulating than during the previous year; a feeling that prices ought to be lower; and the loss to a great extent of the New Orleans trade, growing out of the political troubles there. While the facts named were prejudicial to the manufacturers, there were advantages also which came as an offset. The first of these was a larger territory traveled over by their salesmen than ever before, and new trade brought in. Second, an advance in prices of five to ten cents per pair on children's shoes. The cause of this advance was that goods had been sold too low the year before, and manufacturers felt that they should have remunerating profits, and while the advance somewhat curtailed the demand it also made what remained more profitable. Then, again, the marked backwardness of buyers in purchasing goods beyond their known wants kept their indebtedness within very moderate limits, and resulted, as a general thing, in prompt and satisfactory payments. As buyers were more than usually cautious in their spring purchases, it led to much of the same spirit upon the part of the manufacturers, and at the close of the season, as the stocks on hand were light, they were ready very early to get out samples, and go to work for the autumn trade.

Just here we would make mention of the fact that there is not now, as formerly, a season of a month or two, in the summer and also in the winter, when business is brought almost entirely to a standstill, but as soon as the spring trade is closed arrangements are made for the autumn, which keeps up a uniformity in manufacturing to a good degree all the year round. The unfortunate panic which broke out in September, having its origin in the failure of a private banking house located in this city, greatly paralyzed this branch of the shoe trade, on account of the greater backwardness in purchasing by country dealers. A good many buyers came to market, but there was no speculative feeling among them, and traveling salesmen found the same spirit generally existing throughout the country. Had the panic come one month later, a much larger business would have been transacted by this branch of manufacturers, for by that time the first orders would have been filled, and the goods in a measure sold; but, coming as it did in the midst of the delivery of the first purchases, and while dealers were getting ready for the early autumn trade, they took but very moderate amounts of goods, and have since bought cautiously, exhibiting as much anxiety to liquidate their debts as to increase their stocks. We have before spoken of the large demand for children's and infants' shoes. The makers of goods for ladies' and misses' wear have had their share in this trade, for having the past year gone largely into the manufacture of small shoes in connection with large ones, they have participated in the increased demand, which has done much to prevent the disappointment that must have resulted had it not been for the large call for small shoes. The heavy demand for children's and infants' shoes proves this market to be at the head of the supply for that class of goods, and there are probably as many of them made here as in all the rest of the country put together.

MEN'S AND BOYS' GOODS.

As we have already said, the manufacture of goods for men and boys has greatly increased here, and had it not been for the panic the amount sold would probably have been nearly double what it was the previous year. The manufacture of clinching screw work has been introduced, and the maker looks upon his prospects as entirely satisfactory.

THE JOBBING TRADE.

There has been a very cosiderable falling off in the amount of business transacted by the jobbers; this, in part, has grown out of the backwardness of the spring trade and the more than usual conservative spirit on their part. They did not lay themselves out to do a large business at the opening of the year, and have bought goods cautiously both for the spring and autumn trades, and while at all times they have had satisfactory assortments on hand, both spring and autumn markets have closed with much lighter stocks to carry over to the next season than for a number of years past.

THE AUCTION BUSINESS.

The largely increased sales of the auction houses is no doubt one of the reasons why fewer goods have been sold by the jobbers. As will be seen by the annexed table of the receipts of boots and shoes by sea and by railroad, there has been an increase of about ten per cent. over the previous year, and as the jobbers have received fewer goods, the increase of course must have found sale in the auction houses. We have here seven auction houses devoted wholly or in part to the sale of boots and shoes.

They have generally been fully supplied with goods, both of New England and our own city manufacture. They, as a general thing, have been of a better quality than usual, and notwithstanding there have been times when goods have sold very low, from the fact of their having been kept so well supplied. And few failures having taken place among those who have contributed most of city made goods, we judge that upon the whole, paying prices have been obtained.

INDIA RUBBER GOODS.

The agents of the manufacturers of rubbers have also done an active trade through the autumn. The demand set in early, and for a time the call for goods was in excess of the supply at an advance of five cents per pair on shoes, and twenty five cents on boots.

SUMMARY.

Since the panic broke out there have been a few failures among city manufacturers doing moderate amounts of business, and by country dealers, in some cases, extensions have been asked, the result of which will not be known for a few months yet. In summing up the year's trade we arrive at the conclusion that, if in all things it has not been just what could be desired, it has been sufficiently good to encourage both manufacturers and jobbers to enter on the year 1874 with reasonably good prospects.

We annex the usual table of receipts from out-of-town places during the past year:

	By sea.	By railroad.	Total.
January	2,947	1,420	4,367
February	6,204	1,154	7,358
March	7,237	2,193	9,430
April	6,924	1,090	8,014
May	6,748	1,527	8,275
June	3,349	1,840	5,189
July	5,656	681	6,337
August	9,331	1,300	10,631
September	8,636	2,110	10,746
October	10,259	3,230	13,489
November	6,352	4,918	11,270
December	5,734	1,074	6,808
Total	79,377	22,537	101,914
Received in 1872			91,141
Increase in receipts during 1873 over 1872			10,773

Jan. 22, 1874—There passed through the hands of the inspector of leather for the city and county of Philadelphia, during the year 1873, 544,448 sides of leather, being an increase of 56,562 sides over the previous year.

WHERE AMERICAN SOLE LEATHER IS USED IN EUROPE.

A few years ago all the hemlock sole leather sent from here was used in Great Britain, but it has now been successfully introduced in all parts of Germany, as well as Switzerland, Austria, Belgium and Holland, while our success in obtaining premiums at Vienna, and the favorable impression our stock made on visitors there, will go far toward introducing it in other kingdoms of Europe.

The great preponderance in amount of leather sent to Liverpool, as shown by the table of exports, is due to the fact of that port being the most convenient for shipments from New York and Boston, and considerable leather goes there for reshipment to other ports. As an instance of this, one large firm in the New York Swamp have furnished us with a list of their own shipments, from which we note that 15,000 sides went to Hamburg via Liverpool, and 6,000 to the same port via London, while 24,000 sides were shipped to New Castle, Leeds and Manchester factors, but all via Liverpool and London. Among our shipments to "various ports" were 8,000 sides to Rotterdam, and over 10,000 sides to Switzerland via France. The new "Cardiff Line" took out several thousand sides to Manchester and Liverpool during the early spring, as they offered some advantages in the way of freights, &c. We saw last week, in the store of a New York firm, quite a lot of sole leather baled up and marked for Riga, probably the first lot destined for a Russian port.

IMPORTS OF FOREIGN GOATSKINS IN THE UNITED STATES FOR 1873.

The number of Mexican skins imported into New York for the past year does not vary materially from that of 1872. Fewer Cape and Calcutta skins have been entered this year than last. Imports of Mocha goatskins here have increased from 272 bales in 1872 to over 600 bales in 1873. Only a few years ago all the skins of this description came in at Salem, Massachusetts.

Imports at Boston have been principally of cargoes of Cape and Calcutta goatskins, brought direct from those countries. The receipts at Boston have fallen off largely this year. In 1872 there were 5,521 bales Cape, 1,452 bales Calcutta raw skins, and 1,000 bales of Mochas received, while in 1873 only 3,000 bales Cape and 844 bales Calcutta came in.

In Philadelphia 243,349 Cape goatskins have been received, mostly from the London sales. None of this stock came there last year, but 1,000 bales of Calcutta skins were received during that period, and there were no receipts of that stock for 1873.

The receipts at Baltimore of Cape skins from London were 1,743 bales, showing a large increase.

We notice an increase in the number of Cape skins coming to this country, 931,871 pieces having been received in 1873, against 543,965 in 1872. The fact that this increase is almost entirely in the class of skins sold at London auctions should be a lesson to our importers, who are losing their direct trade from the miserable quality and poor assortment of skins they have brought into the country for the past few years. The morocco trade who use all these goatskins complain that 1873 has been a very poor year in their business.

IMPORTS OF GOATSKINS INTO PHILADELPHIA FOR 1873.

The Philadelphia Custom House monthly reports of imports of goatskins for the year 1873 have been as follows :

		Value.
March 31, for three months, via Liverpool, Cape Town skins, 831 bales,	136,039	$173,462
April 30, Cape Town skins	2,500	1,958
May 31, Cape Town skins	24,660	27,836
July 31, Cape Town skins	18,820	17,358
September 30, Cape Town skins	22,210	20,756
November 30, Cape Town skins	29,200	28,601
December 31, Cape Town skins	9,920	9,820
Total	243,349	279,791

EXPORTS OF HIDES FROM PHILADELPHIA FOR THE FIRST SIX MONTHS OF 1874.

To	Quantity. Bdls.	Value.
Liverpool	18,843	$139,420
Antwerp	4,120	30,916
Total	22,963	170,336

EXPORTS OF LEATHER FROM PHILADELPHIA FROM JANUARY FIRST TO JULY FIRST, 1874.

SHIPMENTS TO ANTWERP.

Date.	Steamship.	Quantity.	Value.
January 5	Vaderland	30,618 lbs	$12,247
March 5	Vaderland	15,500 lbs	3,100
May 7	Vaderland	111,624 lbs	22,325
June 25	Vaderland	28,533 lbs	5,701

SHIPMENTS TO LIVERPOOL.

Date.	Steamship.	Quantity.	Value.
April 2	Indiana	100 rolls	$4,000
April 23	Illinois	9 rolls	370
May 28	Pennsylvania	10,800 lbs	2,000

IMPORTS OF HIDES AT NEW YORK,

For April, May and June, 1874, *and total imports for first six months of* 1874, 1873 *and* 1872, *and for years* 1873, 1872 *and* 1871.

FOREIGN.	April.	May.	June.	Totals.	1874. Total 1st 6 months.	1873. Total 1st 6 months.	1872. Total 1st 6 months.	1873. Total.	1872. Total.	1871. Total.
African					6,266	18,413	27,362	38,949	30,122	51,120
Brazil			200	200	278	1,361	536	1,373	1,447	12,192
Buenos Ayres	58,327	18,052	44,518	120,897	261,520	199,049	239,791	268,770	523,481	764,166
Central America	20,650	13,852	19,415	53,917	106,442	68,166	78,329	144,179	137,073	166,310
European ports			4,650	4,650	29,379	1,216	38,682	14,303	39,216	82,720
East India, loose	104		339	443	443	2,769	2,530	8,843	4,852	2,029
Mexican	7,559	10,282	18,243	36,084	57,954	41,482	64,123	76,519	100,954	128,170
Montevideo	16,023	84,013	13,179	113,215	257,241	223,658	247,532	326,888	424,191	578,973
Orinoco					21,223	4,311	20,795	8,509	65,943	76,925
Rio Grande	39,970	22,234	15,268	77,562	121,657	90,238	97,171	132,458	197,744	299,061
Spanish Main		7,453	744	8,197	29,989	30,149	58,367	75,357	91,000	128,401
West Indies	1,551	11,754	11,706	25,011	30,395	3,811	4,154	8,530	10,702	14,721
Sundry foreign			1,996	1,996	2,049	686	1,306	3,005	4,420	4,929
Total, foreign	144,184	167,730	130,258	442,172	924,836	685,309	880,688	1,107,683	1,632,145	2,279,717
Domestic.										
California	13,092			13,092	14,579	36,501	42,830	81,411	123,407	48,327
New Orleans	28,727	22,780	31,356	82,863	179,281	385,366	220,953	528,980	365,091	250,482
Southern	7,207	3,023	4,763	14,993	60,837	17,753	20,498	33,446	37,924	39,207
Texas	47,897	26,416	24,927	97,240	209,187	338,505	381,333	551,642	566,245	472,519
Railroads	40,129	15,220	22,459	79,808	178,581	74,625	35,542	164,598	76,388	22,343
Sundry domestic	4,843	2,072	5,527	12,442	12,602	1,403	8,021	2,837	3,505	3,901
Total, domestic	141,895	69,511	89,032	300,438	655,067	854,153	703,419	1,362,354	1,172,560	836,779
Total, foreign & domestic	286,079	237,241	219,290	742,610	1,579,903	1,539,462	1,584,107	2,470,597	2,804,705	3,116,496
Calcutta.										
Bales	630	354	412	1,396	2,927	2,785	2,132	4,770	5,078	6,193

MINERAL STATISTICS

OF

PENNSYLVANIA,

ORDERED TO BE COLLECTED BY ACT OF MAY 9, 1871.

MINERAL STATISTICS OF PENNSYLVANIA.

The Legislature by act of the 9th of May, 1871, passed the following act, see pamphlet laws, page 261–2, "For the collection of mineral statistics:"

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same,* That in addition to the information now required to be furnished to the Auditor General by the several railroad and canal companies of this Commonwealth, each of said railroad and canal companies when their railroad or canal passes through any of the coal regions of the State, shall report for the year 1871, and annually as soon after the first day of January in each year, or the close of the fiscal year of said companies, as the information can be procured, under the oath of one of the officers of said company, to the Auditor General, the quantity of coal of each kind, and of coke in tons of two thousand pounds each, received for transportation at each station on every such railroad, and at each coal shipping point on said canal, distinguishing in said report the quantities received direct from the mines from that received from other railroads or canals, giving the name of said connecting railroads or canals in such a manner that the amount of the production of coal on the line of said railroad or canal may be correctly ascertained. The Monongahela slack-water navigation company, and all other slack-water navigation companies engaged in conveying coal or coke are hereby required to make returns in the same manner as is hereinbefore required of railroad and canal companies.

SECTION 2. It shall also be the duty of each of said railroad companies to report the quantity of coal purchased or mined for their own use in this State by them during each year, and which was produced along the line of said railroad, and stating at what place or places the same was mined, and which was not included in the reports of coal received for transportation before mentioned of said railroad, or of any other railroad or canal.

SECTION 3. It shall be the duty of all coal mining companies or firms, and individuals working mines, and of all State and county officers, to furnish to the Auditor General, in answer to his letters or circulars, all information in their possession in regard to the quantity of coal mined that is sent to market direct by any navigable river, or used by any rolling mill, blast furnace, salt works or otherwise, and which is not transported on any railroad, canal or slack-water navigation company, and also to inform him when and of whom correct information as to the coal production of any such locality can be procured; and further to inform him of all accidents in mines in counties where there is no mine inspector appointed by law, and how the same was caused.

Section 4. It shall be the duty of the Auditor General, on receiving said reports, and such other authentic information as he shall collect, to collate said reports and information and make a report giving the results only in tabular form, showing the quantity of coal mined during each year in each county, and in each important coal producing region in a perspicuous form, separating the several kinds of coal into anthracite, semi-bituminous, bituminous and splint or block coal suitable for smelting iron, giving also from time to time the statistics of each region from the beginning of its coal trade so far as it can be ascertained; he shall also specially report the number of accidents resulting in death or injury in coal mines in those counties where there is no mine inspector, classifying them according to the cause thereof, whether occasioned by fire, explosions, falls of roofs or coal in shafts or slopes or other causes under ground or at the surface.

Section 5. The Auditor General shall also, in the same manner, collect statistics, collate, classify and report, at the same time, the quantities of petroleum, salt, iron ore, zinc and other mineral productions of the Commonwealth; also the pig iron and merchant or wrought iron manufactured in the Commonwealth.

Section 6. Eight thousand copies of the said report of the Auditor General, together with his suggestions on the workings of existing laws and his propositions as to new enactments, shall be published for distribution annually, as soon as it is prepared with the title of the Mineral Statistics of Pennsylvania; and one copy thereof shall be sent by mail, by the Auditor General, to each person who shall have furnished him with information as aforesaid and the balance shall be delivered to the Legislature for distribution.

Section 7. Any railroad or canal, or slack-water navigation company, or coal mining company, firm or individual engaged in mining, or any county officer who shall neglect or refuse, for thirty days, to make report or give the information required by this act shall be liable to a penalty of one hundred dollars to be recovered by order of the Auditor General, in an action of debt in which the Commonwealth shall be plaintiff, by the district attorney of the proper county, the one-half thereof to go to said district attorney and the other half for the use of the poor of the proper poor district.

JAMES H. WEBB,
Speaker of the House of Representatives.
WILLIAM A. WALLACE,
Speaker of the Senate.

Approved—The ninth day of May, Anno Domini one thousand eight hundred and seventy-one.

JNO. W. GEARY.

This by 3d section of the act of 15th May, 1874, see pamphlet laws, page 194, was extended to the Secretary of Internal Affairs.

Section 3. That hereafter the Secretary of Internal Affairs, in lieu of the Auditor General, shall send out the blanks required by the act of May ninth, one thousand eight hundred and seventy-one, entitled "An Act for the collection of mineral statistics," and said secretary shall do and perform all the duties enjoined in said act in regard to the collecting, compiling and publishing a report of the same number of copies ordered to be published by the Auditor General.

The act of 11th of May, 1874, see pamphlet laws, page 136, ordered answers to be made to the interrogatories under penalty.

Section 4. The Secretary of Internal Affairs shall exercise all the powers and perform all the duties which at the time of entering upon his office shall appertain to the office of Surveyor General. His department shall embrace a bureau of industrial statistics, the business of which shall be to impartially inquire into the relations of capital and labor, in their bearings upon the social, educational and industrial welfare of all classes of working people, and to offer practical suggestions for the improvement of the same.

The said bureau shall further collect, compile and publish such statistics in regard to the wages of labor and the social condition of the laboring classes as may enable the people of the State to judge how far legislation can be invoked to correct existing evils, and in order to facilitate the duties herein imposed all corporations, firms or individuals engaged in mining, manufacturing or other business, and all persons working for wages within this Commonwealth are hereby required to furnish such statistical information as the chief of said bureau may demand. The chief or duly authorized deputy, shall have power to issue subpœnas, administer oaths and take testimony in all matters relating to duties herein required of said bureau. Any corporation, firm or individual doing business within this Commonwealth who shall neglect or refuse for thirty days to answer questions by circular or upon personal application, or who shall refuse to obey the subpœna and give testimony according to the provisions of this act, shall be liable to a penalty of one hundred dollars, to be collected by order of the

Commissioner of Statistics in an action of debt in which the Commonwealth of Pennsylvania shall be plaintiff. This bureau shall also be required to collect, compile and publish annually the productive statistics of agriculture, mining, manufacturing, commercial and other business interests of the State, and the act of 12th April, 1872, entitled "An Act to provide for the establishment of a bureau of statistics on the subject of labor, and for other purposes," is hereby repealed from and after the first Tuesday of May, 1875.

The Secretary of Internal Affairs shall discharge such duties relating to corporations, to the charitable institutions, the agricultural, manufacturing, mining, mineral, timber and other material or business interests of the State as may be prescribed by law. It shall be his especial duty to exercise a watchful supervision over the railroad, banking, mining, manufacturing and other business corporations of the State, and to see that they confine themselves strictly within their corporate limits; and in case any citizen or citizens shall charge, under oath, any corporation with transcending its corporate functions or infringing upon the rights of individual citizens, said secretary shall carefully investigate such charges and may require from said corporation a special report as enjoined in the Constitution of the State; and in case he believes the charges are just, and the matter complained of is beyond the ordinary province of individual redress, he shall certify his opinion to the Attorney General of the State, whose duty it shall be, by an appropriate legal remedy, to redress the same by a proceeding in the courts, at the expense of the State: *Provided,* The Secretary of Internal Affairs may, with the approval of the Governor, appoint for four years from the first Tuesday of May, 1875, a chief of the bureau of industrial statistics, besides the other clerks of his office allowed by law, whose salary shall be $2,500 per annum.

APPROVED—The 11th day of May, A. D. 1874.

JOHN F. HARTRANFT.

MINERAL PRODUCTS OF PENNSYLVANIA.

The following shows the mineral products of Pennsylvania, the totals being given first:

	No. establishments.	Products.
Total	3,086	$76,208,745 00
Coal, anthracite	229	38,436,745 00
Coal, bituminous	369	13,921,069 00
Copper	2	7,800 00
Iron ore	186	2,944,146 00
Marble	6	101,000 00
Nickel	1	24,000 00
Petroleum	2,148	18,045,967 00
Slate	28	618,229 00
Stone	126	873,876 00
Zinc	1	235,555 00

The above mentioned 3,086 Pennsylvania establishments have invested a cash capitol of $84,660,276; give constant employment to 81,215 hands, to whom they pay $38,815,276 wages annually, and use $6,069,917 worth of material in their mining operations. The mineral products of Pennsylvania is over seventeen times larger than that of the State of New York, and lacks only $182,214 of equaling the entire product of all the other States and Territories together.

THE AGE OF COAL.

It seems probable that vegetable matter may, under favorable conditions, be converted into coal much more rapidly than most chemical geologists are in the habit of assuming. At least, a curious instance of an approach toward such conversion within the historic period has been brought before the German Geological Society. In one of the old mines of the Upper Hartz some of the wood originally employed as timbering has become so far altered as to assume most of the characteristics of a new lignite, or brown coal. It appears that certain of the levels in the ancient workings of this mine are filled with refuse matter, consisting chiefly of fragments of clay slate, more or less saturated with mine water, and containing here and there fragments of the old timber. This wood when in the mine, is wet, and of a leathery consistence, but on exposure to the air it rapidly hardens to a solid substance, having most, if not all, the characteristics of a true lignite. It breaks with a well marked conchoidal fracture, and the parts which are most altered present the black lustrous appearance characteristic of the German "pitch coals," At the same time, chemical examination of the same wood shows that it stands actually nearer to true coal than do some of the younger tertiary lignites. This instance seems, therefore, to prove that pine wood, when placed under highly favorable conditions, may be converted into a genuine lignite, within a period which, from what we know of the history of mining in Hartz, cannot have extended beyond four centuries.

PROGRESSIVE STAGES OF COAL PRODUCTION.

An interesting statistical table was recently submitted to the French Society for the Advancement of Science, showing the progressive stages of coal production in the six leading industrial countries of the world. We make the following abstract:—(the figures used represent millions of tons.)

	England..	U. States..	Germany.	Belgium..	France...	Austria...
1830.................................	20	1½	1½	2	1½	....
1840.................................	34	3½	2¾	4	3	....
1850.................................	56	5	4½	6	4½	....
1860.................................	85	15	12½	10	8½	2
1870.................................	118	39	26½	14	13	....
1872.................................	132	43	33	16	15	5

The United States is the only one of these countries which has vast resources of coal still undeveloped, and, indeed, unknown. Our production, even as compared with that of other countries, gives but little indication of our productive capacity.

CONSUMPTION OF COAL BY VARIOUS INDUSTRIES—ESPECIALLY THAT OF IRON.

In England the Coal Commission has ascertained the consumption of coal by the various industries of Great Britain, with the view of arriving at an estimate of the probable time during which coal-fields now known and worked would supply coal at reasonable prices. But the resulting figures given below show quite well the relative importance of the various industries. In many branches of manufacture the products estimated by weight are very valuable, thus giving a high total value to their products, but it is also true that, as a rule, those industries that use the most coal use the greater amount of raw material, and that very nearly in proportion to the amount of coal used. Hence, directly and indirectly, these industries employ more labor and give rise to a greater interchange of products. They are, therefore, both on account of population and creation of business interests, the most important to a Commonwealth. Out of 1,000 tons mined in Great Britain, the following industries use the amounts opposite their names:

	Tons.
Paper manufacture	6
Copper, lead, zinc and tin smelting	8
Waterworks	14
Breweries and distilleries	18
Chemical works	19
Railroads	20
Steamships	30
Fire brick and glass works and lime kilns	31
Textile industries	42
Gas works	60
Mining	67
Exportation	92
Miscellaneous, including steam engines	172
Iron and steel works	300

We have unfortunately, no means of compiling a similar table for this country. Few are as yet alive to the necessity of such figures as clearly show the demand of our various industries for raw materials, and the various bureaus of government collect commercial rather than technical information. It is only in cases where the industry has been attacked and forced to defend itself that we have accurate data. The iron trade of this country has been and is in this situation, and has had since 1854 a very good system of collecting trade statisics. By its means the trade has been somewhat protected from foreign misrepresentation and misunderstanding at home. (Though much remains to be done to place it on a proper footing.) We must get together the compact body of capitalists and experts required for the successful extension of an industry opposed by such accumulations of skill, experience and capital as Great Britain possesses. We must create our own system of development, and the better the hands into which this work falls the sooner will the desired result be attained. One of the first steps of progress should be for all the older branches of industry, not especially that of iron but of all manufactures, to collect, either through existing associations or otherwise, accurate technical data of their business. Not commercial, such as the totals produce, the number of hands employed, and the value of products, but the figures showing the amount of raw material, labor, steam and water power, &c., used for each unit of production. No injury could result from the exact determination of these items, since they are practically common property already, and the tabulation of the information would only put it into an exact form, and would in itself be a most efficient stimulus to improvement. We are making rapid progress, however, and need have no fear of the ultimate result.

The importance of the iron industry is often underrated in purely commercial quarters. We can, however, show that in one point of view namely, as regards consumption of coal, it is fully as important here as in England, that is in comparison with other industries. We find that the United States produced in 1873

2,290,658 tons pig iron exclusive of charcoal pig.
721,775 tons iron rails.
980,000 tons rolled iron of other kinds.
128,296 tons Bessemer steel rails.
40,0000 tons cast steel.

We find also that the total production of anthracite and bituminous coal amounted in

1873 to	25,567,492 tons anthracite.
1873 to	25,295,448 tons bituminous.
Total	50,862,940

For cast steel we estimate only the coal required to convert from bar iron.

The tons used are all those of 2,000 pounds.

The amount of cast steel for 1873 is stated on the authority of the manufacturers before Congress. The amount of coal is taken from *Miners' Journal Register*. For the other figures we are indebted to report of the American Iron and Steel Association. Now, having these figures we are enable to work backward, by knowing the ratio of coal used to the ton of iron of different kinds, and to the ton of steel. We make the following estimates, based on experience and careful calculation to cover waste, loss on coal in coking, &c.:

One ton pig iron requires	2.25	tons coal.
One ton rolled iron, other than rails	2.40	"
One ton iron rails, including steel-headed rails	2.	"
One ton Bessemer rails	1.80	"
One ton cast steel	5.	"

These figures are considered slightly low, certainly fairly representing the average work of the whole country. They refer, of course, to the finished merchantable product in each case. Multiplying one set of figures by the other, we have:

		Tons.
Tons pig iron	2,290,658×2.25	=5,153,980
Tons iron rails	721,775×2.	=1,443,550
Tons rolled iron	980,000×2.4	=2,352,000
Tons of Bessemer rails	128,266×1.80	= 230,878
Tons of cast steel	40,000×5.	=2,000,000
Total tons coal		9,380,408

Taking these totals we find that the manufacture of iron in the United States required no less than 18½ per cent. of the coal mined in the country. This is merely for the production of the metal, not including the transportation of the 18½ per cent. of the entire coal, nor the power used in mining it.

Our estimate includes iron, excepting rails, only as a raw material for a second series of industries. The pig iron goes into castings say to one-third the amount produced, and the plate and bar iron goes into a vast variety of products. The foundries, forges, mills, and mechanical and locomotive shops form a most extensive series of industries, perhaps rivaling the original in importance. But they all depend on the original production of iron, as given above, and this industry alone uses nearly one-fifth of the entire coal mined in the country.

We cannot compare our estimate with the English figures as they include all the other industries mentioned, while we are unable to make an estimate of them. If, however, England mined last year 130,000,000 tons of coal and used 39,000,000 for all her iron and steel works, we make a good showing with over 9¼ million tons used solely to produce the iron itself.

When we consider the facts involved here, we see how vast an industry this represents. Coal forms but a small part of its needs; its demand for iron ore peoples portions of our country; and its need of limestone, fire-brick, machinery and manufactured products of all kinds, gives rise to an enormous interchange of products. Very few have any idea of the transportation required to effect this exchange. It is easy to see why such an industry should be protected. We can judge of its value to England by the sacrifices she makes and the efforts she puts forth to break up our trade and retain the markets of the world. It is worth as much to us as it is to her, and it is incumbent on us to use every means in our power to supply our own wants and transfer hither as much of her trade as we can.

ANALYSIS OF ANTHRACITE COAL AND COKE FOR BLAST FURNACES.

We are enabled to present herewith some information concerning mineral fuel for blast furnace use which will be found of interest and value, and which may be accepted as entirely trustworthy. Iron masters using anthracite coal or coke in their furnaces, have, as the rule, looked too little to the quality of the fuel. In many instances one coal is considered practically as good as another, and the cheapest and most accessible fuel has been, all things considered, the best, We do not need to tell metallurgists that this is often a serious and costly mistake, and that only careful scientific investigation can be relied upon to determine with certainty whether a coal or coke is fit for use in iron making, or whether fuel brought from a greater distance and if need be, at greater cost, would not be in the end cheaper and more profitable. It is, of course, impossible within the brief compass of this article to discuss the quality, for iron making purposes, of the various fuels employed in different sections of the country. This must be separately determined in each instance, but as a guide to the intelligent examination of fuels we present the following analysis of anthracite coal and coke, the result of which may be taken as average standards by which the value of other fuels may be determined. The analyses, now given to the public for the first time, were made by Mr. J. Blodget Britton, the eminent metallurgical chemist of Philadelphia. The experience of this gentleman in the examination of coals for iron making purposes is large, and the fact that he is the authority for the accuracy of the following analyses entitles them to careful and intelligent consideration by iron makers:

Average results of analyses of nine fair average samples of good anthracite from Wyoming Valley:

Moisture	1.38
Volatile combustible matter	3.52
Ash	3.24
Fixed carbon	91.86
	100.00

Sulphur	.220	Included in the above.
Phosphorus	.011	

Average results of analyses of six fair average samples of good anthracite from the Schuylkill region:

Moisture	1.35
Volatile combustible matter	3.78
Ash	5.81
Fixed carbon	89.06
	100.00

Sulphur	.300	Included in the above.
Phosphorus	.024	

Average results of analyses of nine fair average samples of good anthracite from the Lehigh Valley:

Moisture	1.30
Volatile combustible matter	3.05
Ash	3.54
Fixed carbon	92.11
	100.00

Sulphur	.240	Included in the above.
Phosphorus	.005	

Results of analyses of a sample of Connellsville coke—an average of forty-nine different pieces:

Moisture	.490
Ash	11.322
Sulphur	.693
Phosphoric acid (phosphorus, .013)	.029
Carbon	87.456
	100.00

Results of analyses of the ash of the coke:

Silica	47.90
Alumina	47.76
Sesquoxyd of iron	1.43
Lime	1.48
Magnesia	.53
Sulphur	trace.
Phosphoric acid (phosphorus, .09)	.21
Potash and soda	.49
Undetected matter and loss	.20
	100.00

Not a few of the anthracites sent to market contain a high per cent. of sulphur and a great deal of ash and slaty matter, entirely unfitting them for blast furnace use. The best of them are only second to charcoal for metallurgical purposes. The Connellsville coal is inferior to no other in coking quality. The coke is hard, has a good metalic ring when struck, bears much handling without breaking, does not materially deteriorate by keeping, but loses some of its sulphur. It is an elegant blast furnace fuel, and may be recognized as a standard. A purer coke, however, is afforded by some other of our bituminous coals.

ANALYSIS OF COAL.

We find in Johnson's "Analysis of American Coals," the figures showing the average number of cubic feet in the ton of anthracite coal to be 43.16, thus:

Lykens Valley	46.13
Lackawanna	45.82
Old Co.'s Lehigh	40.49
Peach Mountain R. A.	41.64
Forest Improvement Co	41.74

THE COAL TRADE.

A COMPARISON OF PRESENT AND PREVIOUS PRICES.

The coal trade just now is unusually active. Inquiries by our reporters of prominent dealers and shippers show that while there is a brisk demand the supply is large. Vessels are very scarce, and the prices of the mines have advanced from $3 to $3 25. For the Schuylkill region notice has been given by circular advancing the price of coal for the city and line trade: lump, steamboat, broken and chestnut, 15 cents a ton; egg, 10 cents; stove, 25 cents, which, of course, necessitates a corresponding advance on the part of the retailers. Apropos of the present and prospective high prices of anthracite the following table exhibiting the average annual price per ton per cargo at Philadelphia from 1834 to 1866, will be of interest:

THE PRICE OF COAL AT CERTAIN PERIODS.

1834	$4 84	1850	$3 64
1835	4 84	1851	3 34
1836	6 64	1852	3 46
1837	6 72	1853	3 70
1838	5 27	1854	5 19
1839	5 00	1855	4 49
1840	4 91	1856	4 11
1841	5 79	1857	3 87
1842	4 18	1858	3 43
1843	3 27	1859	3 25
1844	3 20	1860	3 40
1845	3 46	1861	3 39
1846	3 90	1862	4 14
1847	3 80	1863	6 06
1848	3 50	1864	8 39
1849	3 62	1865	7 86

In 1869 the average prices of coal at the mines was $3 20¼ per ton; in 1870, $2 45; in 1871, $2 60⅓; in 1872, $2 14¾; and now, as stated above, it is $2 35 to $3 50, or higher than the average for four years. Last August the price was $1 92$\frac{3}{10}$

COLLIERIES.

Collieries in their simplest form, as now seen in the Allegheny coal-field, where the strata lie nearly horizontal, and generally in the hills or mountains above the level of the streams, or common water level, employ little or no machinery; but at the deep and extensive mines of the Pennsylvania anthracite fields, and in the older mining districts of Europe these establishments are of immense proportions, employing hundreds of hands and a vast capital. Primitively, the process of digging coal and other minerals consisted in simply removing the surface earth, and quarrying the coal on the outcrops of the beds, and this was continued even to a late day.

The most notable instance of modern surface coal mining was at the old Summit mines of the Lehigh, where the great mammoth bed was uncovered to the extent of 30 acres, and produced 2,000,000 tons of coal up to 1847, when it was abandoned. The great bed which was nearly 70 feet thick at this place formed an anticlinal with the axis near the surface where the quarry was opened. A tree which had grown over this spot and extended its roots into the coal bed below, having been uprooted by the wind, revealed the coal to a hunter, who reported the discovery, and from this grew the famous Lehigh coal mines.

The following table shows the number and condition of the anthracite collieries of Pennsylvania :

DISTRICTS.	Number collieries....	Number shafts........	Number slopes........	No. drifts and tunnels.
Schuylkill	164	13	141	102
Northumberland	33	......	18	52
Columbia	8	......	7	4
Dauphin	4	......	4	11
Luzerne, east	80	46	21	68
Do ...west	102	31	43	42
Lehigh district	46	1	59	11
Total	437	91	293	290

ANTHRACITE COAL-FIELDS OF PENNSYLVANIA.

The anthracite of Eastern Pennsylvania owes its importance not only to its exceptional qualities, but to the fact that it lies on the north-east border of the great Appalachian coal-field, having before it, to the north and the east, States destitute of coal, but rich and populous, and abounding in valuable ores of iron, which find in the anthracite the only available fuel for smelting them.

The total area of all the anthracite coal-basins is as follows :

	Sq. miles.
1. Southern or Schuylkill Basin and Mine Hill	146
2. Shamokin, 50 ; Mahanoy, 41 ; and Lehigh basins, 37	128
3. Wyoming and Lackawanna basins	198
Total area of all the anthracite basins	472

It is sometimes difficult to make people believe that all the anthracite or common hard coal of America, which is used everywhere, of which more than 19,000,000 tons are annually mined, and which is sent for use almost all over the Western World, really comes from this one small locality in eastern Pennsylvania. If these regions were all brought together into one body, they would only form a small county, twenty miles wide and a little less than twenty-four miles long. The usual shape and structure of all the several great anthracite tracts of this State are those of long and irregular basins. The depth of the basins depends on the power of the compressing forces which formed them. The thickness of the coal-seams is owing to the local distribution of the vegetable material of which the coal was formed. Where the mammoth bed is found 14, 20, 25 or 30 feet thick, all the coal is mined in that alone if in doing so all the smaller seams shall be destroyed, on the principle that it affords an abundance of coal for our day, and future generations can take care of themselves.

Prof. Rogers reports that the first coal-field possesses an average thickness of 100 feet of coal, and the second and third would measure about 60 feet, and the general average of all the regions together would be about 70 feet, and the separating strata of rock between the several coal-seams vary from 10 to 500 feet thick.

The old Summit Hill mine of the Lehigh Coal and Navigation company was worked in an open quarry of 10 acres in extent, 70 feet in depth, owing to a doubling together of the strata, the seam being actually 55 feet thick measured at right angles, of which more than 40 feet was of the very best quality of coal. In all, 850,000 tons of coal were thus taken out, so that every available acre of land produced 85,000 tons of excellent coal. This mine is now on fire, and has been burning since the year 1857

The real wonder of this famous Pottsville region is the great Mammoth bed of coal, which is often as much as 30, 40, and in some places even 50 feet in thickness, and which lines the slopes of these bleak, barren hills. Millions of tons of the finest coal have been mined from it above water-level. The mining in the older mining districts is now done by slopes and shafts below water-level.

Both the west and the east ends of this great Schuylkill coal basin terminate in elevated mountain valleys, each with its two mountain rims coalescing, the one high above the Lehigh, at Mauch Chunk, and the other high above the Susquehanna, at Dauphin.

The entire area of the various parts of the Schuylkill coal-field is estimated as follows:

	Length in miles.	Square miles.
Mauch Chunk to Tamaqua	14	16
Tamaqua to Pottsville	16	36
Pottsville to the forks of the basin	14	55
North Fork, or Lykens Valley Prong	17	16
South Fork, or Dauphin Prong	27	15
Area of Schuylkill basin	....	138
Mine Hill basin	13	8
Total area of first coal-field	....	146

SECOND COAL-FIELD.

The names by which these two large and important fields are commonly known are derived from the two creeks, by which they are almost exclusively watered. The eastern district, south of the dividing ridge, called Locust mountain, is drained by Mahanoy creek, which empties into the Susquehanna river at Port Trevorton, and is called *The Mahanoy Region.* It is 25 miles in length, with a mean breadth of less than two miles, and contains 41 square miles.

Its southern boundary is the Mahanoy and Broad mountain, and on the north it is bounded by the Big or Head mountain. Its western extremity is bounded on the north by the Locust mountain.

This basin is nearly all in Schuylkill county, the west end only being in in Northumberland and Columbia counties.

The *Shamokin basin* is drained by the Shamokin creek, which empties in the Susquehanna river at Sunbury, and is the western portion of the Second or Middle coal-field. This field is 20 miles in length, with a mean breadth of 2½ miles, and its area is 50 square miles.

This with the 41 square miles of the Mahanoy makes the total area of the Middle coal-field 91 square miles besides the small Lehigh basins.

THE LEHIGH COAL BASINS.

The Lehigh coal-fields consist of seven narrow basins lying contiguous to each other, although small in area, are very productive and important, and afford an excellent quality of coal.

The Lehigh river, between White Haven and Penn Haven, is the eastern boundary of this important region.

The following is Daddow's list of names by which the Lehigh basins are known, their length, width and area in square miles:

	Miles long.	Miles wide.	Square miles.
1. Beaver Meadow	11	¾	8¼
2. Hazleton	14	¾	10
3. Big Black Creek	12	½	6
4. Little Black Creek	7	⅜	2½
5. Lower Black Creek	10	½	5
6. Green Mountain	7	⅜	2¼
7. M'Cauley's Mountain, and others			3
Total area, Lehigh basins			37

The area of some of the Lehigh basins is said to have been increased by recent explorations.

The total production of Lehigh coal in the year 1871 was 2,249,356 tons, and since the opening of the trade 42,306,793 tons.

The peculiar importance of this Lehigh region, and the eastern extremity of the southern or Schuylkill field at Mauch Chunk, consists in the valuable qualities of the coal which they produce.

In the most remote parts of our country, in the States on the Mississippi river, on the Pacific coast, in the interior of our far western territories, all through the South, as well as in the more populous regions and large manufacturing cities on the Atlantic slope, Lehigh coal is one of the great necessities of manufacturing. No coal dealer, anywhere in the country, has a stock of coal to supply all his customers, if he has no Lehigh. Its special qualities consist in its large amount of carbon, its purity and its hardness. By passing a strong current of air through it, when ignited, an intense heat can be procured, sufficient to melt cast iron.

Where the genuine Lehigh coal cannot be procured for foundry purposes, the other and softer varieties of anthracite are substituted, and where they are out of reach, coke from bituminous coal is used.

General Geological Structure of the Third Coal-field.—The general configuration of the Wyoming basin is a wide and shallow trough, deeper in the middle than at the sides, yet deepening so gradually toward the centre as to be, if we regard the subordinate undulations of the strata, approximately flat.

This prevailing levelness of its bed or floor, notwithstanding the considerable angles of dip, frequently more than 30 deg., is at once apparent when we compare the great width of the valley, four or five miles in its middle district, with the very moderate depth of 1,200 or 1,500 feet, or perhaps 1,800 feet.

The total production of the Wyoming and Lackawanna valleys, or the Third coal-field, in the year 1871, was 6,481,171 tons, carried by nine railroads and one canal, or 43 per cent of the whole production, which, by Mr. Bannan's statistics, was 14,965,501 tons of anthracite. Since the opening of the trade this region has produced 78,308,841, and all of the regions 219,981,040 tons.

COAL—SEMI-BITUMINOUS.

A line drawn on the map of Pennsylvania and Maryland, through the Blossburg region, in a south-western course, would pass through or near the Broad Top and Cumberland, as well as two other immediate semi-bituminous coal regions at Snow Shoe and Phillipsburg, in Centre county, Pennsylvania, all of which produce the same species of coal.

The production of the semi-bituminous regions in Pennsylvania, in 1871, was as follows:

	Tons.
1. Blossburg, three coal companies	815,079
2. M'Intyre, one coal company	106,130
3. Towanda, two coal companies	378,335
4. Snow Shoe, one coal company	82,468
5. Phillipsburg, sixteen coal companies	542,896
6. Johnstown, or Cambria iron works, one coal company	263,472
7. Cambria county, on Pennsylvania railroad, ten coal companies,	206,792
8. Broad Top, nineteen coal companies	319,618
Total	2,714,790

James Macfarlane, general agent of coal companies in Tioga and Bradford counties, furnishes the following:

COAL SENT TO MARKET, 1873, TIOGA COUNTY, PENNSYLVANIA.

		Tons.
Fall Brook coal company		312,466
Morris Run coal company		357,384
Blossburg coal company		321,207
Total, Tioga		991,057
LYCOMING COUNTY.		
M'Intyre coal company		212,462
BRADFORD COUNTY.		
Towanda coal company	252,329	
Fall Creek B coal company	85,315	
		337,644
Total of the three counties		1,541,163

As compared with 1872:

Tioga county, (increase,)	141,695
Lycoming county, (increase,)	41,035
	182,730
Bradford county, (decrease,)	45,198

BLACKSMITH'S COAL.

In the New York, Philadelphia, Baltimore, Boston, and other Atlantic markets, no other coal is sold or used for blacksmithing but Cumberland, Clearfield and Broad Top; while in the interior of the State of New York, in Western Canada, or Ontario, and in all the western or north-western States, every blacksmith uses Blossburg coal, which is the generic name by which all this kind of coal from northern Pennsylvania is called. As an instance of the distance to which this valuable fuel is carried, it may be stated that 75,053 tons were shipped in 1871 from Oswego and Buffalo to Canada, and our own western States. Chicago alone took 21,248 tons before the great fire, and had an insufficient supply, much of which was re-sold and shipped off by railroad westward and north-westward. Some of it was re-sold as far as Omaha, and shipped still farther westward. The blacksmiths of Salt Lake City, Utah, use Blossburg coal, and it is even carried in sacks over the plains, and over the mountains through the gold regions of our western territories, to sharpen the tools of the miner. This is owing to the fact that the western coal does not possess those peculiar qualities required for this business.

All the puddling and heating furnaces from Troy, New York, to Buffalo, use Blossburg coal in very large quantities. But the largest demand for Blossburg and other semi-bituminous coal is for the *generating of steam* in locomotive and stationary boilers.

The following is a summary of the total joint production of coal from the Blossburg, M'Intyre and Towanda coal regions for 1870 and 1871 :

COAL REGIONS.	1871.	1870.	Increase.
Blossburg region, 3 companies	815,079	733,035	82,044
M'Intyre, 1 company	106,130	17,808	88,322
Towanda, 2 companies	378,335	273,335	105,000
Total tons	1,299,544	1,024,178	275,366

The coal produced in 1871 was used as follows :

For locomotive purposes	619,054
By rolling mills	242,142
By Onondaga salt company	170,142
By stationary engines, steamboats, &c	168,285
By blacksmiths	99,852
Total as above	1,299,544

The total production of these three districts since the mines were opened is 6,453,222 tons, of which 5,881,750 tons were from the Blossburg region proper.

SEMI-BITUMINOUS—BROAD TOP MOUNTAIN.

The Broad Top mountain coal region is strictly and geologically an independent or isolated coal region, situated forty miles east of the declivity of the Allegheny mountains, which form the eastern boundary of the first bituminous coal basin. Parts of it are situated in Bedford, Huntingdon and Fulton counties, and the outlet to market for its coal is by the Huntingdon and Broad Top Mountain railroad to Huntingdon, thirty-six miles, and from thence to Philadelphia, two hundred and three miles. Trough Creek valley, Plank Cabin valley and Wells' valley, in Huntingdon and Bedford counties, form a trench around the Broad Top mountain, with its coal basin, and Brush Creek valley is attached to the ring at its southern end. This ring or circular valley is a deep depression worn out of the red shale by the Juniata river and other water courses, one thousand feet deep below the crest of the enclosing mountains. It is usually but one or two miles wide, but at its northern end forms a triangular opening six miles wide at its base and eighteen miles long, rising to the top of the knob of Terrace mountain, overlooking the county of Huntingdon. In the centre of this ring rises the mountain mass of the Broad Top, containing eighty square miles of coal measures, disposed in six parallel basins and crowned with a central peak, the "Broad Top," rivaling in height the summit of the Allegheny mountain, forty miles distant. Near the summit of this peak remains a small, round patch of the Pittsburg or Westmoreland gas coal bed, a few acres in extent; the sole relic of vast deposit of this famous bed remaining in all the country between Cumberland, in Maryland, on the south, Blairsville, in Indiana county, on the west, and Donaldson, in the Pottsville basin of the anthracite coal region, on the east.

The Huntingdon and Broad Top Mountain railroad was completed in 1856, when the first coal was sent to market The total production of the region has been 3,942,005 tons in sixteen years ; that of 1871 was 319,625 tons, and the average has been about 300,000 tons per annum for the past twelve years. The specific gravity of Broad Top coal is 1,330, and of Pittsburg coal 1,285.

BROAD TOP SEMI-BITUMINOUS COAL TRADE.

Statement exhibiting the amount of coal mined and sent to market in 1873, *from the collieries of the Broad Top semi-bituminous coal region, with present facilities and estimated capacity for* 1874, *furnished by John Fulton, mining engineer.*

NAME OF COLLIERY.	NAME OF PROPRIETOR.	NAME OF OPERATOR.	Tons net, sent to market in 1873.	No. of miners at colliery........	Number of other workmen......	No. of miners' houses.........	Galler's or rooms in working order	Average capacity in tons per day,	Estimated value of colliery improvements....
Coalmont......	Chandler & Peabody...........	....	......	......	......	11	7	40	$80,000
Cumberland...	Huntingdon & Broad Top R. R. Co.	John Whitehead & Co..............	10,392	28	3	5	15	80	12,000
Crawford......	....do.........do.........do....	..do........do.....do..............	8,909	6	2	8	4	30	15,000
Powelton......	Powelton Coal and Iron Co.......	Berwind & Bradley................	48,676	95	30	50	100	280	150,000
Barnet Plane..	....do........do........do........	....do........do....................	7,084	......	......	......	......	......	30,000
Barnet.........	Orbison, Dorris & Co..............	R. U. Jacob & Co..................	33,803	56	13	10	37	150	30,000
Dudley Slope..	Wood & Bacon....................	J. M. Bacon........................	4,164	22	6	23	18	65	30,000
Blair's.........	David Blair.........................	..do....do..........................	25,967	37	10	13	27	130	20,000
Howe..........	....do...do..........................	..do....do..........................	9,139	14	1	......	15	50	5,000
Union.........	J. Hartman.........................	....	......	......	......	14	8	30	20,000
Broad Top.....	Semi-Anthracite Coal Co.........	J. F. Mears........................	239	......	......	......	2	......	3,000
Mooredale.....	..do.......do........do............	..do...do...........................	29,046	40	5	36	30	150	20,000
Fisher's........	Fishers & Miller...................	Fishers & Miller..................	24,248	50	6	17	45	150	25,000
Carbon........	Rathmell Wilson..................	J. F. Mears........................	19,877	53	6	5	31	150	25,000
Cook...........	Broad Top Improvement Co......	P. Ammerman.....................	4,356	16	3	23	8	50	20,000
Mount Equity.	Riddlesburg Coal and Iron Co....	Kemble Coal and Iron Co..........	11,781	35	8	17	30	120	30,000
Duval Shaft...	Rathmell Wilson..................	....do......do........do...........	42,221	......	......	37	15	100	50,000
Cunard........	R. B. Wigton......................	R. B. Wigton......................	23,259	46	9	31	69	200	50,000
Mount Eagle..	Reed, Wilson & Co...............	W. H. Piper.......................	22,208	51	10	14	26	130	20,000
Scott Shaft.....	Hon. John Scott..................	William Scott.....................	12,986	20	4	10	20	100	45,000
Edge Hill......	Rathmell Wilson..................	Dr. Jenkins........................	2,741	28	3	28	55	200	40,000
Delaware......	....do........do......................	....	......	......	......	......	16	80	15,000
Alexis.........	Six Mile Run Coal Co............	Andrew Gleason..................	9,144	25	3	15	27	100	40,000
		Cumberl'd Coal over H. & B. T. R. R.	123,932	......	......	......	......	......	......
		Total..........................	474,178	622	122	367	605	2,385	775,000
		Increase for the year...........	155,806						

BITUMINOUS COAL REGIONS OF WESTERN PENNSYLVANIA.

THE LOWER COAL-MEASURES.

The Pennsylvania bituminous coal-field may be considered as a great and complex basin, for such it really is. Its boundary on the east or south-east is very well defined by the abrupt declivity of the Allegheny mountain. West and north-west of this long straight rim of this vast basin, lies this coal-field, which is only the north-eastern extremity of the trough-shaped plain or table-land which ranges thence uninterruptedly south-westward to the centre of Alabama. The courses of the streams show that the general surface ascends gradually toward the north where the Allegheny river drains it throughout. It runs through a deep and comparatively narrow trench in the coal-basin.

Prof. Rogers accounts for its changes of course, from south-east to south-west, by the action of two great currents of eroding water, when the continent was elevated, the main one flowing south-westward from the Allegheny mountain, and the other south-eastward from the region of the lakes and cutting valleys at right angles to each other.

From the summit of the Allegheny, the country declines both ways, but it is only with what lies west of it that we are concerned.

This district, west of the Allegheny water-shed, is not a simple slope, but is a great, irregular trough, the southern portion being, in fact, a series of parallel troughs, caused by the ridges of Negro mountain, Laurel Hill, and Chestnut Ridge, rising up, sometimes 1,200 feet high, within the south-eastern part of the coal-field, the Conemaugh and Youghiogheny rivers crossing them, and cutting gaps down through them to their base. Around the north-western borders of the basin, where the waters emptying into the Allegheny separate from those flowing into Lake Erie, the elevation is about 1,200 feet.

The northern part of the basin is also geologically undulated into six coal-basins. The north-western tract of the coal-field, the fifth and sixth basins, gradually subsides in level toward the south-west, and the strata also decline in the same direction, but at a somewhat faster rate than the surface does, and hence the south-western portion of the State contains a greater thickness of coal-measures than the north-eastern. Indeed, in Potter, M'Kean, Warren and parts of the counties south of them, the table land is almost entirely destitute of the coal-producing parts of the formation, and is only overspread by the conglomerate and other older rocks known to underlie any workable coal bed.

THE PITTSBURG SEAM.

It is seldom that a seam of coal is so well defined and so easily followed as this Pittsburg seam. It may be observed at the following elevation above the Monongahela in descending the stream at different places, viz: Morgantown, West Virginia, 180 feet; at Greensboro', thirteen miles below, and two miles below the Pennsylvania line, 200 feet. Below Brownsville it dips nearly into the river, but rises again regularly as we go down the river, till at Monongahela City it is 150 feet; at Elizabethtown 200 feet and at Pittsburg 300 feet. Below Greensboro' the elevations are approximate only but above that place they are actual measurements.

The seams of coal of the lower coal-measures have been reached in boring for salt water at Pittsburg, Greensboro' and at various other places.

The depth of the first two seams at Pittsburg was 140 and 180 feet below the Ohio river.

The Monongahela river, for about 95 miles from the Virginia State line to Pittsburg, possesses every important advantage for the production of coal. It is, therefore, not surprising that the annual tonnage of this district is larger than that of any other bituminous coal region of the United States. The coal is of an excellent quality for iron making, for generating steam, for gas and for domestic purposes. It is found in unlimited quantities in the hills on both sides of the river, at short distances only from the water, the coal being often run from the mouths of the mines by slides or incline planes into the boats. The seam is of a good, workable thickness, four and a half feet and upward, of pure coal. The facilities for mining are excellent, and the transportation being by water, is cheaper and for longer distances than that of any other coal region in the United States. The Monongahela river is made navigable, at all seasons of the year, by dams, with locks large enough for steamboats and the largest coal boats, each carrying 800 tons, and barges carrying 440 tons. A large portion of the Monongahela river coal is run down the Ohio and Mississippi to market, the distance from Pittsburg to New Orleans by river being 2,096 miles. There were 1,847,609 tons of coal shipped in the year 1871 by the Monongahela navigation alone.

MERCER COUNTY BLOCK COAL.

Beneath the conglomerate we find a small group of coal measures, which comes in under the great conglomerate in the country, between French creek and the Ohio line, containing a valuable seam.

This is the Sharon coal, in Mercer county. It is a species of semi-cannel coal, with a slaty structure and a dull, jet-black lustre, with a thickness of from three to four feet. It seems an extraordinary circumstance that the most important coal region in north-western Pennsylvania and eastern Ohio, as respects the present production and the quality of its coal, should be almost outside of what was regarded as the coal region and below the coal-measures. The so-called splint-seam, producing block coal, belongs to a group of coal strata which, although appertaining to the true coal formation, were long ago recognized as being beneath the main body of the conglomerate.

Though the bed is frequently a mixture of coal and slate, as its name implies, it produces the most valuable coal in the United States, and it embraces one and sometimes two important beds.

One of the most important uses to which mineral coal has been applied is the smelting of iron or the manufacture of pig or cast iron from the ore The qualities required for this purpose are, sufficient hardness in the mechanical structure of the coal to bear the pressure of a charge and the high temperature required in the blast furnace, the absence of all the melting or caking property, which would stop the draught in the stack, freedom from sulphur, in order to produce iron of good quality, and sufficient heating power. There were nearly 500,000 tons of block coal produced in Mercer county in 1871, and twenty-three blast furnaces, in the district above mentioned, were running on this coal in that year, with others in the course of construction. There are about the same number of furnaces on the Ohio side of the line.

The principal locality where this peculiar coal is produced is along the line of a small branch of the Erie and Pittsburg railroad, at Sharpsburg, seventy-five miles south of Erie. The mines are in Hickory township, and in the vicinity of Sharon, Wheatland and Middlesex, in the south-western part of Mercer county, and the area is quite limited.

THE CONNELLSVILLE COKE REGION

Throughout the first trough or basin west of the Chestnut Ridge, which may now be properly called the Connellsville basin, the superb Pittsburg bed, the great coke-seam, occupies the middle of the field, and appears along two parallel lines of out-crop which range from half a mile to two and a half miles asunder, that being the width of the basin.

In some neighborhoods the bed as it dips into the middle of the trough descends to a considerable depth below the lowest water course, while in other places the bottom of the basin which it forms does not reach the water level. This is the now celebrated Connellsville region.

Connellsville coke has become very celebrated not only about Pittsburg but throughout the western States, where it is extensively used for foundry purposes in melting pig iron, selling in competition with Lehigh coal. It is used in blast furnaces for smelting iron from the ore, and is sometimes mixed with western coals.

It is also an excellent fuel for locomotive use. Its freedom from sulphur has given this coke the representation of being the best known. The Pittsburg and Connellsville railroad is a large transporter of the coal and coke of this region, while a portion of it produced near the mouth of the Youghiogheny finds its way to market by the Monongahela river slack-water navigation.

The South-western Pennsylvania railroad which leaves the Pennsylvania Central at Greensburg, and passes through Connellsville and Uniontown, and thence in course of construction to the Cheat river is designed to penetrate this coke region, and will afford increased facilities for the shipment of coal and coke.

Connellsville coal weighs eighty pounds to a bushel, and when properly coked a hundred bushels of coal produce one hundred and twenty-five bushels of coke, and the coke weighs forty pounds to a bushel; that is, a given quantity of the coal gains one-quarter in bulk, and loses three-eighths of its weight, or one hundred pounds of coal makes sixty-two and a half pounds of coke.

At the Dunbar furnace seventy bushels of coke produced from two gross tons of coal, smelt a ton of pig iron, but the Pittsburg furnaces use eighty to eighty-five bushels, the difference being owing, probably, in part at least, to the kinds of ore and limestone used.

I regret not to have been able to procure approximate statistics of this coke trade. The manufacturers, dealers, and even coke exchange are all too busy to furnish statistics.

THE COUNTIES WITH AND WITHOUT COAL.

Of the sixty-six counties in Pennsylvania, the following twenty-five contain no coal whatever, viz: Philadelphia, Delaware, Chester, Montgomery, Bucks, Northampton, Lehigh, Berks, Lebanon, Lancaster, York, Adams, Franklin, Cumberland, Mifflin, Juniata, Perry, Snyder, Union, Montour, Monroe, Pike, Wayne, Susquehanna and Erie They are all situated in the south-eastern part of the State, except Erie, which is in the north-western corner. The anthracite coal of Pennsylvania is situated principally in the four counties of Dauphin, Schuylkill, Carbon and Luzerne; with smaller quantities, the borders of the basins in Northumberland and Columbia counties, and there is a semi-anthracite coal in Sullivan and a little in Wyoming county

Six counties contain detached fields of semi-bituminous coal, Bradford, Lycoming, Tioga, Huntingdon, Bedford and Fulton. The following twenty-seven counties in the western and north-western part of the State contain bituminous coal, a portion of which along the eastern margin of the field is semi-bituminous, viz: Somerset, Fayette, Greene, Washington, Westmoreland, Cambria, Indiana, Armstrong, Allegheny, Beaver, Lawrence, Butler, Clarion, Jefferson, Clearfield, Blair, Centre, Clinton, Cameron, Elk, Forest, Venango, Mercer, Crawford, Warren, M'Kean, and Potter, or in all forty-one coal producing counties. Of so vast a coal region with a very intricate structure, only a general account can be given. Its total area is 12,222 square miles, besides eighty miles in Broad Top, and 472 in the anthracite fields, making a total of 12,774 square miles of coal of all kinds in Pennsylvania.

The geological report of Prof. Rogers, in three volumes, is the basis of our knowledge of the coal-fields of Pennsylvania. Fuller and detailed reports upon special localities have since added largely thereto. The latest work which appears to be a full and accurate compend, "The Coal Regions of America," in one volume, by James Macfarlane, has been the source from which we have condensed our sketches.

DISTANCES TO MARKET.

The following are the distances from a portion of the American coal-fields, to the different tidewater markets:

Points.	By	Miles.
From Pottsville to New York	Canal	226
From Pottsville to New York	Rail and water	196
From Pottsville to Philadelphia	Canal	106
From Pottsville to Philadelphia	Rail	93
From Mauch Chunk to New York	Lehigh canal	173
From Mauch Chunk to New York	Morris canal	147
From Mauch Chunk to New York	Rail	126
From Mauch Chunk to Philadelphia	Canal	124
From Mauch Chunk to Philadelphia	Rail	89
From Carbondale to New York	Rail and canal	208
From Scranton to New York	Rail	143
From Wilkesbarre to New York	Rail	192
From Wilkesbarre to Philadelphia	Rail and canal	168
From Wilkesbarre to Mauch Chunk	Rail	55
From Wilkesbarre to Baltimore	Rail and canal	260
From Wilkesbarre to Baltimore	Canal	246
From Shamokin to Baltimore	Rail and canal	200
From Shamokin to Baltimore	Northern Central railroad	148
From Cumberland to Baltimore	Rail	206
From Cumberland to Georgetown	Canal	184
From Cumberland to Alexandria	Canal	191
From Broad Top to Philadelphia	Rail	212

PENNSYLVANIA COAL TRADE

OFFICIAL STATISTICS.

Of the anthracite coal trade, and also of the bituminous coal trade moved toward the seaboard for the year 1873.

In 1872 the quantity of anthracite coal sent to market was 18,932,265 tons; and the estimated quantities consumed in the coal regions were put at 3,100,000, making the whole quantity mined 22,032,265 tons as follows:

	Sent to market. Official.	Home consump'n. Estimated.	Total product.
Schuylkill	4,135,908	875,000	5,010,908
Northumberland	1,221,327	170,000	1,391,327
Columbia	319,220	15,000	344,220
Dauphin	450,328	30,000	480,328
Wyoming	9,194,808	1,500,000	10,694,808
Lehigh	3,610,674	500,000	4,110,674
	18,932,265	3,100,000	22,032,265

The whole quantity mined and sent to market, together with the estimated quantity consumed in the coal regions, in 1873, we give as follows:

	Sent to market. Official.	Home consump'n. Estimated.	Total product.
Schuylkill	4,252,043	880,000	5,132,043
Northumberland	1,234,070	170,000	1,404,070
Columbia	358,741	25,000	383,741
Dauphin	449,915	30,000	479,915
Wyoming	10,047,241	1,675,000	11,722,241
Lehigh	3,243,168	463,000	3,706,108
	19,585,178	3,243,000	22,828,178

The total supply of anthracite coal sent to market in 1872 and 1873, sums up as follows:

	Tons.
In 1873	19,585,178
In 1872	18,932,265
Increase in 1873	652,913

The whole production, including the consumption in the regions, foots up as follow:

	Tons.
In 1873	22,828,178
In 1872	22,032,265
Increase in production in 1873	795,913

The whole supply of bituminous coal embraced in our tables, and moved towards the seaboard was:

	Tons.
In 1873	5,515,784
In 1872	5,231,998
Increase in 1873	283,786

The above increase of 283,786 tons bituminous coal, added to the increase of 652,913 tons anthracite, makes the total increase for the year 936,699 tons.

The following table gives the official quantity of coal mined in the different coal regions, with the production of each separated and credited to each region. The quantity under the head of the Schuylkill region, embraces all the coal sent from Schuylkill county, and also the quantity mined in Columbia and Northumberland counties sent to market via the Schuylkill Valley; and all the coal from the Schuylkill and Wyoming regions, sent to market via the Lehigh Valley is also reported and credited to the proper regions.

OFFICIAL TABULAR STATEMENT.

Of the whole product of anthracite coal, and that portion of bituminous coal moved toward the seaboard, in 1873, *compared with* 1872.

SCHUYLKILL REGION.	1872. Tons.	1873. Tons.	Increase. Tons.	Decrease. Tons.
Reading railroad	4,092,540	*4,340,321	247,781	
Schuylkill canal	838,191	743,796		94,395
Lehigh and Mahanoy	370,215	493,342	123,127	
	5,300,946	5,577,459		
Less Shamokin reported double	194,495	368,303		173,908
	5,106,451	5,209,156 5,106,451	370,908 268,203	268,203
Increase in 1873		102,705	102,705	

*The total coal tonnage of the Philadelphia and Reading railroad in 1873 was 6,546,553, including 665,223 tons anthracite and 323,354 tons bituminous coal received at Harrisburg and other points.

OFFICIAL TABULAR STATEMENT—*Continued.*

LEHIGH REGION.	1872. Tons.	1873. Tons.	Increase. Tons.	Decrease. Tons.
Lehigh Valley railroad	3,492,608	*3,734,797	242,189	....
Lehigh and Susquehanna railroad	1,727,611	†1,959,111	231,500	....
Lehigh canal	767,094	736,252	....	30,842
	5,987,313	6,430,160		
Less Wyoming and Schuylkill	2,376,639	3,186,992	....	810,353
	3,610,674	3,243,168	473,689	841,195
	3,243,168			473,689
Decrease in 1873	367,506	....	....	367,506
WYOMING REGION.				
Pennsylvania canal company	321,311	295,399	....	25,912
Pennsylvania coal company	1,213,478	1,239,214	25,736	....
Lackawanna and Western R. R., north	846,107	‡986,619	140,512	....
Lackawanna and Western R. R., south	1,994,478	‡2,149,737	155,259	....
Delaware and Hudson company	2,516,565	2,472,449	....	44,116
Lackawanna and Bloomsburg	296,445	210,173	....	86,272
Via Lehigh	2,006,424	2,693,650	687,226	....
	9,194,808	10,047,241	1,008,733	156,300
		9,194,808	156,300	
Increase in 1873	....	852,433	852,433	....
SHAMOKIN REGION	569,689	635,383	65,694	....
		569,689		
Increase in 1873	....	65,694	65,694	....
LYKENS VALLEY REGION	450,308	449,915	....	413
	449,915			
Decrease in 1873	413	....	....	413
Total anthracite	18,932,265	19,585,178	....	....
		18,932,265		
Increase in 1873	....	652,913	....	....
BITUMINOUS.				
Broad Top	318,372	474,178	155,806	....
Penn'a Central and Phila. and Erie	2,067,524	§1,946,771	....	120,753
Chesapeake and Ohio canal	816,103	778,802	....	37,301
Baltimore and Ohio railroad	1,517,347	1,745,429	228,032	....
Via Pennsylvania Extension	22,021	114,589	92,568	....
	4,741,367	5,059,769	476,456	158,054
Imported coal	490,631	456,015	....	34,616
	5,231,998	5,515,784	476,456	192,670
Anthracite	18,932,265	19,585,178	192,670	....
Total all kinds	24,164,263	25,100,962	283,786	....
		24,164,263		
Total increase in 1873	....	936,699	....	....

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* The total coal tonnage of the Lehigh Valley railroad in 1873, was 4,144,340 tons, including 28,026 tons of bituminous coal.

† The total coal tonnage of the Lehigh and Susquehanna railroad was, in 1873, 3,089,698 tons. The balance is reported by other companies.

‡ Net tons—all the others are gross tons.

§ The total coal tonnage of the Pennsylvania railroad was 4,527,501 tons, of which 1,173,960 were anthracite and 3,353,541 bituminous.

The supply of anthracite coal sent to market in 1872 and 1873 was furnished as follows :

	1872.	1873.	Increase.	Decrease.
Schuylkill	4,135,908	4,252,043	116,135	
Northumberland	1,221,327	1,234,070	12,743	
Columbia	319,220	358,741	39,521	
Lykens Valley	450,328	449,915		413
Wyoming	9,194,808	10,047,241	852,433	
Lehigh	3,610,674	3,243,168		367,506
	18,932,265	19,585,178	1,020,832	367,919
		18,932,065	367,919	
		652,913	652,913	

Below we give the quantities of coal sent to market since 1860, from the three principal regions, the Schuylkill, the Wyoming, and the Lehigh. The coal credited to the Lehigh is the quantity mined in what is termed the Lehigh district. The Schuylkill embraces all the coal sent to market from Schuylkill county, and also that mined in Northumberland and Columbia counties sent to market via the Schuylkill Valley :

Year.	Schuylkill.	Wyoming.	Lehigh.
1860	3,270,516	2,941,817	1,821,774
1861	2,607,489	3,055,140	1,738,377
1862	2,890,598	1,145,770	1,351,054
1863	3,443,265	3,759,610	1,984,713
1864	3,642,218	3,960,836	2,054,699
1865	3,735,802	3,256,658	1,822,535
1866	4,633,487	3,736,616	2,128,867
1867	4,334,820	5,328,322	2,062,446
1868	4,414,356	5,990,813	2,507,582
1869	4,748,960	6,068,365	1,929,083
1870	3,720,103	7,559,902	1,040,303
1871	5,124,780	6,481,171	2,249,356
1872	5,107,451	9,191,171	3,610,674
1873	5,209,156	10,047,291	3,243,168

THE CONSUMPTION OF COAL IN THE UNITED STATES.

Taking the official returns of the production of anthracite coal in the United States in 1873, together with the official returns of the bituminous coal produced and sent towards the seaboard, and from former data, estimating the balance, we give the following as the total coal production in 1873 :

Anthracite sent to market	19,585,178
Anthracite consumed in regions	3,243,000
Total production of anthracite	22,828,118
Bituminous coal sent towards seaboard, embraced in our tables	6,085,222
Estimated production of bituminous coal not embraced in our tables	16,500,000
Total production in 1873	45,413,340
Foreign coal imported	456,015
	45,869,355
Exported	584,633
Total supply for consumption in 1873	45,284,722

It will be seen by the above figures that the quantity of anthracite and bituminous coal produced were nearly equal, as follows:

Total anthracite	22,828,118
Total bituminous	22,585,222
Total	45,413,340

In 1865 we commenced estimating the quantity of bituminous coal produced in the United States from the regions not embraced in our table, and we have put down the production of coal in this country, as follows, since 1864:

	Tons.
1864	22,500,000
1865	24,400,000
1866	28,855,918
1867	28,361,847
1868	31,479,114
1869	33,761,010
1870	36,622,131
1871	37,861,415
1872	42,749,243
1873	45,413,340

This shows an increase of upwards of 100 per cent. in the production of coal in the United States within the last ten years, and if the same ratio of increase should continue for the ensuing ten years, the consumption in 1883 would reach 90,000,000 tons.

The investments in the coal business to produce 45,000,000 tons of coal annually, and to carry the same to market, is immense, amounting in the aggregate to not less than probably five hundred millions of dollars, and to produce this additional quantity, and to transport it to market in the ensuing ten years, the reader can form some idea of the additional capital that will be required to furnish that quantity for consumption.

SCHUYLKILL CANAL.

Tonnage and distribution of coal shipped via Schuylkill canal from December 1, 1872, to November 30, 1873, inclusive:

	Tons.
Schuylkill Haven	302
Auburn	7
Port Clinton	10
Hamburg	3,185
Mohrsville and Shoemakersville	3,849
Leesport and Duncan Canal	13,010
Felix and Kissinger's Dam	3,403
Reading	33,223
Yost's Landing	337
Birdsboro'	305
Monocacy	8,835
Pottstown Landing	421
Springville and Lawrenceville	1,429
Royer's Ford	7,786
Black Rock	328
Phœnixville	1,567
Brower's Landing	7
Norristown	534
Conshohocken	4,006
Spring Mills,	18,707
Manayunk	25,764
Salem	1,242
New Castle and Newport	5,678
Brandywine and creek	8,990
Wilmington	26,325
Marcus Hook	1,077
Chester and Chester Creek	14,406
Gloucester	5,820
Darby and Darby creek	1,013
Philadelphia and vicinity	259,104
New York and vicinity	303,126
Total,	743,796

Of the above quantity, 117,016 tons were delivered on the line short of Philadelphia; 54,550 tons were sent south of Philadelphia, and 303,126 tons east of Philadelphia.

PHILADELPHIA AND READING RAILROAD COMPANY.

Points of supply and distribution of anthracite and bituminous coal on the Philadelphia and Reading railroad and branches for the year ending November 30, 1873:

Amount of coal received from various lateral railroads in coal region:

	Tons.	Tons.
Schuylkill Valley railroad	50,843	
Mill Creek	170,746	
Mahanoy and Shamokin	1,520,972	
Total at Port Carbon		1,742,561
Mount Carbon branch at Mount Carbon		145,646
Mine Hill and Schuylkill Haven road at Schuylkill Haven		1,443,135
Lebanon and Tremont branch at Pinegrove		366,007
Little Schuylkill railroad at Tamaqua		642,972
		4,340,321
Received at Harrisburg and Dauphin	222,006	
Received at Allentown and Alburtis	8,876	
Received at Orcland and Willow Street wharf	80,082	
Summit, Catawissa and Rupert	344,259	
		655,223
		4,995,544
Bituminous received at Harrisburg and Belmont		323,354
Total as per detailed statement below		5,318,898
Coal passing over laterals for shipment by canal	735,074	
Coal shipped West via N. C. R. R. and Williamsport branch	301,838	
Coal consumed on laterals	190,771	
		1,227,65
Total of all, tons 2,240 lbs		6,546,553

THE COAL TRADE OF THE LINE.

The trade of the line between Pottsville and Philadelphia, and on the Lebanon Valley railroad, &c., was as follows for the last twenty-three years:

Years.	Railroad.	Canal.	Total.
1850	166,992	40,871	207,836
1851	199,650	112,697	312,836
1852	189,661	132,550	322,211
1853	238,328	155,750	394,078
1854	283,212	160,940	441,160
1855	294,385	187,476	481,861
1856	329,365	191,139	520,499
1857	313,178	198,799	511,977
1858	235,577	205,589	441,169
1859	341,601	213,173	554,774
1860	385,860	223,017	608,887
1861	278,647	156,673	435,320
1862	416,856	129,060	545,916
1863	548,755	122,834	671,589
1864	634,074	114,364	748,408
1865	659,376	87,250	746,029
1866	836,598	174,407	1,010,905
1867	935,694	178,132	1,107,826
1868	597,903	123,014	730,917
1869	923,504	113,549	1,037,053
1870	1,072,400	116,764	1,189,164
1871	1,128,227	94,813	1,223,040
1872	1,357,208	114,213	1,471,431
1873	1,670,189	117,016	1,787,205

Showing an increase of 315,774 tons over 1872. The increase in 1872 over 1871 was 248,391 tons, making an increase of 564,165 tons in the consumption on the line in two years under the policy inaugurated by President Gowen, in protecting the line trade.

LEHIGH VALLEY RAILROAD.

The coal in 1872 and 1873 was received from the following sources:

From.	1872. Tons.	1873. Tons.
Wyoming region	508,933	881,629
Hazleton region	2,192,877	2,123,098
Upper Lehigh region	3,089	2,975
Beaver Meadow region	756,564	629,571
Mahanoy region	385,971	503,803
Mauch Chunk region	2,683	3,266
Total	3,850,118	4,144,340

LEHIGH CANAL COAL TRADE.

The following is the quantity of coal transported through the Lehigh canal during the year 1873, and the distribution of the same, and also the points from which it was received:

	Tons.
Received from Mauch Chunk	235,486
Received from Beaver Meadow	131,535
Received from Mahanoy	20,891
Received from Hazleton	199,891
Received from Upper Lehigh	29,907
Received from Wyoming	118,542
Total	736,252

The above coal was distributed as follows:

Consumed on line of Lehigh canal	81,395
Passed into Morris canal to tidal points	2,614
Passed into Morris canal to local points	28,233
Passed into Delaware and Raritan to tidal points	257,798
Passed into Delaware and Raritan to local points	13,566
Consumed on line of Delaware Division canal	39,662
Passed through to Bristol and Philadelphia	312,984
Total	736,252

LEHIGH AND SUSQUEHANNA RAILROAD.

The coal tonnage of the Lehigh and Susquehanna railroad for 1873, was derived from the following sources:

	Tons.
Wyoming region	1,812,021
Upper Lehigh	200,301
Beaver Meadow	346,752
Hazleton	207,723
Mauch Chunk	522,821
Total	3,089,698
Total in 1872	2,527,069
	562,629

BELVIDERE AND DELAWARE RAILROAD COAL TONNAGE.

The following is the quantity of coal transported over this road, received from the Lehigh region in the following years :

Years.	Through.	Way.	Total.
In 1873	786,240	369,142	1,115,332
In 1872	877,614	87,939	965,553
In 1871	563,093	69,334	632,427
In 1870	632,667	81,910	714,277
In 1869	455,684	72,539	528,223
In 1868	312,228	19,065	331,292
In 1867	269,738	18,586	288,321
In 1866	174,508	13,554	188,062
In 1865	202,781	11,535	214,345
In 1864	161,268	13,095	174,323
In 1863	....	....	110,494
In 1862	....	....	129,452
In 1861	....	....	145,907
In 1860	....	....	146,308
In 1859	....	....	135,205
In 1858	....	....	99,000
In 1857	....	....	123,248

Of the above 1,155,332 tons of coal transported, 944,819 tons were derived from the Lehigh regions, and 210,513 tons from the Wyoming region. Of the through coal 327,465 tons were shipped at Coal Port, and 458,775 at South Amboy. The balance, including 71,649 tons used by the company, was consumed on the line of the road.

LATERAL ROADS IN SCHUYLKILL COUNTY.

The following was the coal tonnage of the lateral railroads in Schuylkill county in 1872 and 1873 :

	1872.	1873.	Increase.	Decrease.
Mine Hill and Schuylkill Haven	1,730,623	2,030,513	299,890	....
Mahanoy and Broad Mountain	1,815,384	1,726,590	....	88,794
Mill Creek	327,714	232,055	....	95,659
Schuylkill Valley	131,595	110,973	....	20,622
Mount Carbon	186,051	230,602	44,551	....
Little Schuylkill	835,420	732,867	....	102,553
Lorberry Creek	180,357	243,391	63,034	....
Good Spring	152,115	144,852	....	7,263
	5,327,847	5,580,227	....	....
Lehigh and Mahanoy	386,972	503,802	....	....
Total	5,714,819	6,083,029	....	....
Union railroad	332,452	388,240	55,791	....

This shows an increase of 369,210 tons over the lateral transportation of 1872.

MORRIS CANAL COAL TRADE.

This company has been leased and is now worked by the Lehigh Valley railroad company. The following is the annual tonnage of this canal since the year 1845:

Year.	LEHIGH COAL FROM			Scranton coal.	Total.
	Canal.	Railroad.	Total.		
	Tons.	Tons.	Tons.	Tons.	
1845	12,567	....	12,567	....	12,567
1846	41,152	....	41,142	....	41,142
1847	61,951	....	61,951	....	61,951
1848	82,159	....	82,159	....	82,159
1849	103,482	....	103,482	....	103,482
1850	98,100	....	98,100	....	98,100
1851	137,237	....	137,237	....	137,237
1852	180,189	....	180,189	....	180,189
1853	222,582	....	222,582	....	222,582
1854	267,864	....	267,864	....	267,864
1855	290,730	....	290,730	....	290,730
1856	284,828	808	285,636	17,764	303,400
1857	227,652	13,047	240,699	43,599	284,298
1858	281,949	5,350	287,299	55,426	342,725
1859	255,405	5,780	261,185	89,146	350,331
1860	276,947	....	276,947	127,517	404,464
1861	272,616	1,401	274,017	140,922	414,939
1862	106,431	45,738	152,169	172,128	324,297
1863	208,397	48,234	256,631	145,815	402,446
1864	194,097	37,644	231,745	151,122	382,866
1865	217,814	74,171	291,984	124,204	416,189
1866	205,351	112,790	318,141	141,034	459,175
1867	171,266	107,206	278,472	146,359	424,831
1868	181,828	106,981	268,809	78,736	347,545
1869	78,787	134,504	213,291	67,896	281,187
1870	69,991	205,467	275,458	84,385	359,843
1871	44,821	201,429	246,260	69,350	315,610
1872	29,146	242,445	271,591	70,392	341,983
1873	30,592	522,371	242,763	55,785	298,749
	5,789,868	1,555,366	6,315,234	1,781,582	8,126,816

Of the above quantity 156,532 tons reached tide, and 142,216 tons were consumed on the line.

LYKENS VALLEY COAL TRADE.

Shipments from Summit Branch railroad company and Lykens Valley coal company, for the year ending November 30, 1873:

	Tons.
Summit Branch railroad company, Williamstown colliery	301,326
Lykens Valley coal company, Big Lick colliery	107,585
Lykens Valley coal company, Short Mountain colliery	50,248
Total	459,160

Shipped as follows:

By canal south from Millersburg	54,762
By rail east	219,814
By rail south	175,338
By local sales	9,245
Total	459,160

The heaviest shipment ever made from a single colliery in a year, in this country, was the product from the Williamstown colliery, which it will be seen reached 301,326 tons. In 1872 the shipment from the same colliery was 269,774 tons, giving an increase in 1873 of 31,552 tons.

Shipments from Mineral railroad and mining company, Shamokin, Pa.:

	Tons.
Cameron colliery	101,576
Luke Fiddler colliery	64,635
Hickory Swamp colliery	78,451
Hickory Ridge colliery	2,715
Total	247,377

Shipped as follows:

By canal south from Sunbury	24,814
By railroad south	134,737
By railroad east	58,057
By railroad west	29,769
Total	247,377

These shipments are from November 30, 1872, to November 30, 1873.

NORTHERN CENTRAL RAILROAD.

The following is the coal tonnage of the Northern Central railroad south, for the following years, which has been furnished us by Mr. S. Little, Auditor:

	Way.	Baltimore.	Total.
1866	177,954	100,110	278,146
1867	304,567	148,810	453,275
1868	455,345	175,334	630,679
1869	414,665	146,534	561,198
1870	534,858	173,948	708,805
1871			792,513
1872	518,622	279,534	798,056
1873	567,631	199,442	767,073

The coal was received from the following points in 1872 and 1873:

	1872.	1873.
Lykens Valley	381,624	389,924
Shamokin	108,544	137,741
Lackawanna and Bloomsburg railroad	307,888	239,408
	798,056	767,073
	767,073	
Decrease in 1873	30,983	

In adddition to the above there were 28,376 tons of bituminous coal transported over the road, received from the Pennsylvania railroad, making the coal tonnage for the year, 795,449 tons.

LEHIGH AND MAHANOY RAILROAD.

The following is the quantity of coal sent over this road by the different operators, from December 1, 1872, to November 30, 1873:

	Tons.
Pine Creek	16,069
West Buck Mountain	4,338
Malvern, (Coxe, Bedford & Co.,)	17,682
Coplay, (Lentz, Bowman & Co.,)	79,696
Glendon, (J. B. Boylan,)	39,380
Primrose, (old and New)	67,212
Lehigh Colliery, (Hill & Harris,)	5,969
M'Neal Nos. 1 and 2	50,717
M'Neal No. 3	26,744
M'Neal No. 4, (late West Lehigh,)	11,940
Philadelphia Coal Co., (Shenandoah,)	68,532
Philadelphia Coal Co., (Lehigh Colliery,)	66,809
Middle Lehigh	35,354
Beaver Run	2,544
Black Diamond	10,457
Other shippers	354
Total	503,802

The above shipments are all from Schuylkill county except 10,460 tons.

NORTH PENNSYLVANIA RAILROAD COAL TRADE.

Quantity transported over this road from the Lehigh region in the following years:

	Way. Tons.	Through. Tons.	Total.
In 1858			73, 124
In 1859			80, 432
In 1860			91, 327
In 1861			88, 389
In 1862			103, 947
In 1863			113, 680
In 1864			123, 475
In 1865			129, 695
In 1866			141, 841
In 1867			140, 827
In 1868			218, 614
In 1869	55, 606	100, 207	225, 846
In 1870	94, 890	334, 267	426, 158
In 1871	119, 037	108, 402	227, 440
In 1872	170, 009	170, 986	340, 995
In 1873	176, 615	250, 836	427, 451

Increase 1873, 86,456 tons.

PENNSYLVANIA RAILROAD.

The following is a statement of coal tonnage forwarded to all points by Pennsylvania railroad during 1873:

From	Anthracite. Tons.	Bituminous. Tons.
West Philadelphia	28, 772	
Columbia, (received by canal,)	29, 570	
Rockville	427, 348	
Marysville	381, 519	
Aqueduct, (received by canal,)	15, 242	
Sunbury	177, 669	
Other points	113, 840	
Huntingdon and Broad Top		257, 010
Cumberland		124, 307
Bald Eagle Valley		3, 514
Snow Shoe		76, 042
Tyrone and Clearfield		592, 860
Allegheny		220, 409
West Pennsylvania railroad		259, 340
South-West Pennsylvania railroad		255, 355
Gas coal		878, 944
Pittsburg coal		685, 611
Other points		149
Totals	1, 173, 960	3, 353, 541 1, 173, 960
Total coal tonnage in 1873		4, 527, 501

We did not have the whole coal tonnage of the road in 1872 and cannot therefore give the increase in 1873 over 1872, but presume it will reach a million of tons of both kinds.

BLOSSBURG, TOWANDA AND RALSTON COAL TRADE.

The following is the quantity of coal sent to market annually up to the present time :

Years.	Blossburg. Tons.	Towanda. Tons.	Ralston. Tons.
1840	4,235		
1841	25,966		
1842	13,164		
1843	6,268		
1844	14,234		
1845	29,836		
1846	16,509		
1847	29,807		
1848	33,763		
1849	32,095		
1850	23,161		
1851	25,000		
1852	20,000		
1853	45,507		
1854	70,214		
1855	73,204		
1856	70,669	2,295	
1857	94,314	6,265	
1858	41,894	17,560	
1859	48,593	30,143	
1860	76,918	27,718	
1861	112,712	40,835	
1862	179,334	52,779	
1863	235,843	54,535	
1864	384,977	62,058	
1865	394,642	73,167	
1866	411,759	99,453	
1867	481,318	74,739	
1868	602,328	73,665	
1869	715,094	180,610	
1870	733,035	271,335	17,808
1871	815,079	378,335	106,130
1872	849,262	382,842	171,427
1873	991,057	337,664	212,462
	1,722,069	2,168,038	507,827
Increase in 1873	141,695	*33,567	41,035

* Decrease.

The total supply from the above three regions was as follows :

	Tons.
In 1873	1,541,763
In 1872	1,403,530
Increase in 1873	138,233

The total supply since the opening of the trade foots up 10,397,914 tons.

The coal sent to market from Blossburg in 1873, was mined as follows :

	Tons.
Fall Brook coal company	312,466
Morris Run coal company	357,384
Blossburg coal company	321,207
Total	991,057

Since the commencement of the trade the coal was furnished from the following points:

Total tons from Old Blossburg mines 1840 to 1859	533,745
Total tons from Fall Brook, 1860 to 1873	2,497,760
Total tons from Morris Run, 1853 to 1873	3,517,726
Total tons from Blossburg company, 1868 to 1873	1,172,838
Total	7,722,069

The coal from the Towanda region was furnished in 1873 as follows:

	Tons.
Towanda coal company	252,329
Fall Brook bituminous coal company	85,315
Total	337,644

From the commencement the supply has been as follows:

	Tons.
Barclay coal company, 1856 to 1867	430,650
Towanda coal company, 1855 to 1873	1,332,661
Fall Brook bituminous coal company, 1865 to 1873	484,707
Total	2,168,038

The Blossburg, M'Intyre (Ralston) and Towanda coal produced in 1873 has been used as follows:

In locomotives on railroads	887,927
In rolling mills	286,958
In manufacturing salt	149,789
In blacksmithing	124,356
In steam and other purposes	89,133
Total	1,541,163

The above bituminous regions produced, as will be seen by the figures, over and above a half million tons of coal in 1873. A cubic yard of coal in the ground will produce one ton. If this one and a half millions of tons had been all mined from a gangway six feet wide in a seam four and a half feet thick, the gangway or tunnel thus formed, produced one ton per foot, would have measured 284 miles in length, or nearly from Corning to New York city; or calculated by the acre it would require all the coal in 207 acres of land of the thickness mentioned.

COAL TONNAGE OF THE CENTRAL RAILROAD OF NEW JERSEY.

The following is a statement showing the number of tons of coal transported over the Central railroad of New Jersey, during the year 1873 :

Years.	Lehigh. Tons.	Lackawanna. Tons.	Total. Tons.
1856	33,325	98,670	131,994
1857	84,881	209,950	294,791
1858	122,923	417,726	540,549
1859	180,054	461,430	641,487
1860	263,885	590,862	854,647
1861	254,367	568,869	823,235
1862	311,296	502,375	816,571
1863	435,729	613,594	1,049,686
1864	474,221	675,743	1,149,963
1865	599,619	494,687	1,004,304
1866	511,076	779,173	1,290,249
1867	513,383	854,520	1,369,903
1868	765,657	853,189	1,618,846
1869	733,495	822,567	1,556,062
1870	997,504	1,054,680	2,052,184
1871	1,244,998	632,066	1,877,064
1872	1,538,590	689,626	2,228,217
1873	1,980,619	485,460	2,466,069
	10,953,602	10,806,134	21,763,135

	Tons.
Received from Lehigh	1 ,980 ,619
Received from Lackawanna	485 ,600
Total	2 ,466 ,219

MORRIS AND ESSEX RAILROAD.

The following is the annual tonnage of this road from its commencement in 1867 :

	Way.	Through.	Total.
In 1867	99,559	133,662	243,321
In 1868	146,820	300,519	446,039
In 1869	192,216	360,300	552,282
In 1870	191,209	655,292	846,500
In 1871	202,052	652,954	855,006
In 1872	137,708	794,648	932,356
In 1873	313,414	1,352,385	1,665,799

Increase in 1873, 733,442 tons.

NORTHUMBERLAND COUNTY COAL TRADE.

The following is the quantity of coal mined and sent to market from Northumberland county in 1873, by the different operators:

Collieries.	Operators.		Tonnage. 1873.
Mineral Railroad and Mining Co	Cameron	103,969	256,709
Mineral Railroad and Mining Co	Hickory Swamp	82,572	
Mineral Railroad and Mining Co	Luke Fidler	67,381	
Mineral Railroad and Mining Co	Hickory Ridge	2,786	
Isaac May & Co	Burnside	77,726	149,148
May, Audenried & Co	Buck Ridge	71,422	
Wm. Montelius	Stuartville		79,104
G. W. Johns & Bro	Monitor		77,929
Alex. Fulton	Henry Clay		77,879
A. A. Heim & Goodwill	Bear Valley	67,700	76,272
A. A. Heim & Goodwill	Geo. Fales	8,572	
T. Baumgardner & Co	Reliance		74,639
Patterson, L. & Co	Big Mountain		70,227
Excelsior Coal Mining Co	Excelsior		63,779
Phila. and Reading Coal and Iron Co	Trevorton	60,762	60,987
Phila. and Reading Coal and Iron Co	Locust Spring	1,618	
Phila. and Reading Coal and Iron Co	Helfelstein	606	
Douty & Baumgardner	Ben Franklin		39,683
Burton Bro. & Co	Coal Ridge		34,800
Enterprise Coal Co	Enterprise	12,399	33,503
Enterprise Coal Co	Mar. Franklin	21,104	
Guiterman & Gorman	Greenbank	29,182	29,311
Guiterman & Gorman	Brady	129	
Wm. Brown	Dan. Webster	14,348	28,140
Wm. Brown	Lambert	11,205	
Wm. Brown	Franklin	2,587	
Thos. Morton & Bro	Morton		19,433
Weaver & Martin	Shamokin		18,097
J. Langdon & Co	Hickory Ridge		15,331
Schwenk & Co	Black Diamond		15,926
Smith & Keiser	Lancaster		543
Reese & Bros	Marshall		2,877
Greeber, Kemple & Co	Locust Gap		2,144
Tillot & Bro	Royal Oak		700
			1,234,070
Total in 1872			1,221,327
Increase in 1873			12,743

Of the above quantity of coal, 670,443 tons were sent east via Philadelphia and Reading railroad, 10,460 via Lehigh Valley, 567,006 sent west, and 3,766 tons via Treverton and Susquehanna railroad. There were also 23,072 tons of bituminous coal transported over the Shamokin Branch of the Northern Central railroad, in 1873, which passed over the Lehigh Valley railroad to market.

THE COAL PRODUCT OF THE UNITED STATES IN THE CENSUS YEAR 1869-1870—TONS OF 2,000 POUNDS.

Compiled from the census of 1870, by the Pottsville Miners' Journal, and revised by the Census Office.

STATES.	Number of counties.	Number of collieries.	Number of engines...	Power of engines...	Number of men......	Number of boys......	Capital invested ...	Wages paid	Value of materials furnished,	Tons produced....	Value of product..	Average value at colliery..
Pennsylvania.												
Anthracite.	8	229	829	48,809	43,943	9,078	$50,936,785	$22,982,813	$3,596,440	15,650,275	$38,436,745	$2 53
Bituminous............	26	359	69	1,851	16,517	334	16,974,918	8,995,495	604,691	7,798,518	13,921,069	1 77
Total for Pennsylvania	34	588	898	50,660	60,460	9,412	67,911,703	31,978,308	4,201,131	23,448,793	52,357,814	....
Illinois..........................	37	322	92	2,645	6,166	135	4,286,575	3,192,977	399,331	2,624,163	6,097,432	2 33
Ohio...........................	28	307	76	3,363	7,246	321	5,891,813	3,381,108	252,447	2,527,285	5,482,952	2 16
Maryland....	2	22	7	431	2,672	55	23,891,600	1,473,325	166,479	1,819,824	2,409,208	1 33
Missouri.........................	18	56	33	2,308	1,878	....	2,587,250	1,270,804	316,082	621,930	2,011,820	3 24
West Virginia	12	41	10	177	1,043	97	1,434,800	619,376	48,564	608,878	1,035,862	1 70
Indiana.........................	13	46	22	771	1,299	70	554,442	664,592	61,890	437,870	988,621	2 26
Iowa............................	18	96	5	145	1,341	13	618,332	580,157	73,102	263,487	874,334	3 32
Kentucky......................	15	30	4	125	676	38	717,950	278,411	27,828	150,582	446,795	2 97
Tennessee.....................	6	11	2	51	399	20	313,784	187,383	15,945	133,418	330,498	2 47
Virginia.......................	4	6	15	1,297	642	....	779,200	168,120	20,312	61,803	226,114	3 66
Kansas.........................	5	20	......	....	252	....	106,430	89,191	2,601	32,938	114,278	3 47
Michigan......................	2	3	3	82	85	8	106,500	58,400	7,550	28,150	104,200	3 70
Rhode Island.................	1	2	2	140	70	5	80,000	33,000	4,100	*14,000	59,000	4 21
Alabama.......................	2	2	......	....	57	....	26,000	33,970	351	11,000	39,000	3 54
Nebraska	1	3	......	....	6	2	850	2,950	1,450	1,435	8,550	6 00
Wyoming......................	1	1	1	20	150	15	250,000	225,000	48,000	50,000	800,000	16 00
Washington	1	1	2	80	80	....	300,000	70,869	13,394	17,844	207,064	6 00
Utah............................	2	6	1	15	25	....	44,800	2,550	5,985	5,800	14,950	2 58
Colorado......................	2	3	......	....	16	....	36,000	9,000	2,410	4,500	16,500	3 66
Total....................	238	1,566	1,173	62,310	84,563	10,191	110,008,029	44,316,491	5,668,955	32,863,690	73,524,992	....

*Anthracite.

RECAPITULATION.

Capital invested in collieries in the United States		$110,008,029
Wages paid in 1869		44,316,491
Supplies furnished at mines in 1869		5,668,955
Production of coal in 1869—Anthracite		15,664,275
Production of coal in 1869—Bituminous		17,199,415
Total production in 1869		32,863,690
Value of the same at mine		$73,524,992
Number of men employed	84,563	
Number of boys employed	10,191	
		94,754
Number of steam engines used in mining		1,173
Horse power of engines used in mining		62,310
Number of collieries worked		1,566
Number of counties in which collieries were worked		238

COAL PRODUCTION OF THE WORLD.

We give the following as the production of coal in all countries up to the latest dates:

Years.	Countries.	Production.
1873	United States	45,413,340
1873	Nova Scotia	1,051,467
1872	Great Britain	123,386,758
1872	France, (estimated)	15,000,000
1872	Belgium	13,773,176
1870	Prussia	23,816,238
1872	Austria, (estimated)	7,000,000
1867*	Russia	259,921
1869*	Spain	593,033
1868*	India	547,971
1869*	New South Wales	919,522
1862*	Poland	112,500
All other countries, (estimated,)		2,000,000
Total consumption of the world		233,373,926

*McFarlane.

Of which Great Britain produces more than one-half.

IRON PRODUCTION.

CONDITION OF THE IRON TRADE.

In consequence of the panic which swept over the country a year ago, the iron industry of Pennsylvania is at present very greatly depressed, and in view of the great reduction in the price of iron abroad an increase of duty is loudly called for to infuse new life into this important industry and to enable our manufacturers to successfully compete with foreign rivals, and to fully re-gain and maintain supremacy.

That the marvelous growth of the iron industry of our country has been mainly the result of the policy of protection which the people through their representatives have adopted and enforced cannot be denied—but what the people want is ample protection against foreign interests. With prices beaten down to the lowest possible cost of production; with many thousands of iron workers and miners out of employment, and thousands of others working at reduced wages; with idle furnaces, and rolling mills, and foundries in every iron district and manufacturing city of the country; with large stocks of unsold iron in almost every iron market, it is a proper time to consider whether it is wise longer to encourage the importation of foreign iron by continuing the reduction of duties which Congress has twice authorized during the past four years. This reduction it has been abundantly proved did not reduce the cost of iron to consumers, while the government lost the revenue on imported iron to the amount of the reduction. If the reduction is continued, encouragement is thus given to the foreign ironmaker to send to our shores, as has been the case within the past twelve months, many ship loads of iron which could have been as cheaply made in our own country. But for the heavy importations of foreign iron after the demand for American iron had commenced to slacken, there would be more general activity in the American iron trade to-day, and employers and employees would be in better heart.

The aggregate value of our importations of iron and steel, and manufactures thereof, during the twelve months which ended on June 30 last, was $59,000,000. We now see that these importations were not needed, and have done immense harm to the home iron trade and all dependent upon it.

An increase of the duty on pig iron and upon other classes of iron and steel, would be a wise measure of relief for Congress to enact immediately after it assembles.

PRODUCTION OF PIG IRON IN THE UNITED STATES IN 1872 AND 1873.

COMPLETE RETURNS FROM EVERY STATE.

We present herewith full and accurate statistics of the production of pig iron in the United States in 1872 and 1873, derived from returns made directly to the office of the American Iron and Steel Association by the makers and by the regular correspondents of the association. This exhibit is the most complete of the kind that has ever been given to the country, and its preparation alone has cost the association thousands of dollars. We briefly summarize the leading facts set forth in the detailed statements which follow, premising them by remarking that our tables do not include abandoned furnaces:

Whole number of stacks, December 31, 1871	571
Whole number of stacks built in 1872	41
Whole number of stacks, December 31, 1872	612
Whole number of stacks built in 1873	50
Whole number of stacks, December 31, 1873	662
Whole number of stacks in blast, January 1, 1874	410
Whole number of stacks out of blast, January 1, 1874	252
Whole number of stacks completed in first six months of 1874	11
Whole number of finished stacks, July 1, 1874	673
Whole number of stacks building, July 1, 1874	53
Whole number of stacks projected, July 1, 1874	61
Total production in 1872, tons of 2,000 pounds	2,854,558
Total production in 1873, tons of 2,000 pounds	2,868,278
Estimated annual capacity of all finished stacks, net tons	4,500,000
Number of States having furnaces	25
Number of States making pig iron in 1872	21
Number of States making pig iron in 1873	22

PRODUCTION OF PIG IRON IN 1872 AND 1873 BY STATES.

STATES.	No. of stacks in blast Jan. 1, 1874.	No. of stacks built in 1872.	No. of stacks built in 1873.	Whole No. stacks in 1872.	Whole No. of stacks in 1873.	Whole No. of stacks July 1, 1874.	No. of stacks building in 1874.	No. of stacks projected in 1874.	Make in 1872—Tons of 2,000 lbs.	Make in 1873—Tons of 2,000 lbs.
Maine	1			1	1	1				780
Vermont	1			2	2	2			2,000	3,100
Massachusetts	5			6	6	6			17,070	21,136
Connecticut	8			10	10	10			22,700	26,977
New York	43	2	4	49	53	53	4	3	291,155	296,818
New Jersey	6	2	1	12	13	13	4	1	103,858	102,341
Pennsylvania	166	19	14	248	262	263	18	16	1,401,497	1,389,573
Maryland	17			22	22	23		2	63,031	55,986
Virginia	13	2	3	32	35	36	4	1	21,445	26,475
North Carolina	3		1	7	8	8	1	2	1,073	1,432
South Carolina				8	8	8				
Georgia	6		2	6	8	9	3	1	2,945	7,501
Alabama	7		3	8	11	12	4	3	12,512	22,283
Texas				1	1	2			619	280
West Virginia	5	1	1	5	6	6	3	3	20,796	23,056
Kentucky	16			25	25	27		2	67,396	69,889
Tennessee	11	1	1	19	20	20	2	7	42,454	43,134
Ohio	65	6	5	83	88	88	8	9	399,743	406,029
Indiana		2		8	8	8			39,221	22,486
Illinois	1		2	8	10	10	2		78,627	55,796
Michigan	19	4	6	27	33	34		6	100,222	123,506
Wisconsin	7	1	3	10	13	14			65,036	74,148
Minnesota						1				
Missouri	10	1	4	14	18	18		5	101,158	85,552
Oregon				1	1	1				
Total	410	41	50	612	662	673	53	61	2,854,558	2,868,278

CHARCOAL.

STATES.	No. of stacks in blast, Jan. 1, 1874,	No. of stacks built in 1872.....	No. of stacks built in 1873.....	Whole No. of stacks in 1872....	Whole No. of stacks in 1873....	Whole No. of stacks, July 1, 1874,	No. of stacks building in 1874..	No. of stacks projected in 1874..	Make in 1872—Tons of 2,000 lbs.	Make in 1873—Tons of 2,000 lbs.
Maine	1	....	....	1	1	1	....	....	....	780
Vermont	1	....	....	2	2	2	....	....	2,000	3,100
Massachusetts	4	....	....	5	5	5	....	....	12,820	15,704
Connecticut	8	....	....	10	10	10	....	....	22,700	26,977
New York	14	1	2	15	17	17	....	....	19,812	29,329
Pennsylvania	28	....	1	38	39	39	....	....	45,033	45,854
Maryland	12	....	....	14	14	14	....	....	29,044	30,315
Virginia	11	2	2	30	32	33	2	1	21,445	20,075
North Carolina	3	....	1	7	8	8	1	1	1,073	1,432
South Carolina	....	....	....	8	8	8	....	....	....	....
Georgia	6	....	2	6	8	9	3	1	2,945	7,501
Alabama	7	....	3	8	11	12	4	3	12,512	22,283
Texas	....	....	....	1	1	2	....	....	619	280
West Virginia	3	....	1	3	4	4	....	....	950	1,950
Kentucky	14	....	....	22	22	23	....	2	39,699	42,219
Tennessee	10	....	....	17	17	17	....	3	34,094	34,532
Ohio:										
Hanging Rock	33	....	....	33	33	33	....	....	87,440	92,365
Miscellaneous	2	....	....	4	4	4	....	....	8,182	8,133
Michigan	18	2	6	22	28	29	....	6	86,616	113,475
Wisconsin	6	1	2	8	10	11	....	....	27,790	38,880
Minnesota	....	....	....	....	....	1	....	....	....	....
Missouri	8	....	2	7	9	9	....	2	45,589	39,536
Oregon	....	....	....	1	1	1	....	....	....	....
Total	189	6	22	262	284	292	10	19	500,363	574,720

BITUMINOUS COAL AND COKE.

STATES.	No. of stacks in blast, Jan. 1, 1874,	No. of stacks built in 1872	No. of stacks built in 1873	Whole No. of stacks in 1872	Whole No. of stacks in 1873	Whole No. of stacks, July 1, 1874,	No. of stacks building in 1874	No. of stacks projected in 1874	Make in 1872—Tons of 2,000 lbs.	Make in 1873—Tons of 2,000 lbs.
Pennsylvania:										
Shenango Valley	15	5	2	29	31	31	2	1	160,188	160,831
Allegheny county	11	4	....	11	11	11	1	1	110,599	158,789
Miscellaneous	18	....	1	31	32	32	3	2	117,224	111,014
Maryland	1	....	....	4	4	4	....	2	12,079	5,264
Virginia	....	....	....	....	....	....	1	....	....	....
North Carolina	....	....	....	....	....	....	....	1	....	....
West Virginia	2	1	....	2	2	2	3	3	19,846	21,106
Kentucky	2	....	....	3	3	4	....	....	27,697	27,670
Tennessee	1	1	1	2	3	3	2	4	8,360	8,602
Ohio:										
Hanging Rock	5	1	1	6	7	7	5	2	23,169	28,601
Mahoning Valley	14	2	1	27	28	28	....	....	200,785	157,888
Miscellaneous	11	3	3	13	16	16	3	7	80,167	119,042
Indiana	....	2	....	8	8	8	....	....	39,221	32,486
Illinois	1	....	2	8	10	10	2	....	78,627	55,796
Michigan	....	....	....	3	3	3	....	....	13,382	795
Missouri	2	1	2	7	9	9	....	3	55,569	46,016
Total	83	20	13	154	167	168	22	26	946,913	933,900

ANTHRACITE.

STATES.	No. of stacks in blast, Jan. 1, 1874,	No. of stacks built in 1872	No. of stacks built in 1873	Whole No. of stacks in 1872	Whole No. of stacks in 1873	Whole No. of stacks, July 1, 1874,	No. of stacks building in 1874	No. of stacks projected in 1874	Make in 1872—Tons of 2,000 lbs.	Make in 1873—Tons of 2,000 lbs.
Massachusetts	1	....	....	1	1	1	....	....	4,250	5,432
New York	29	1	2	34	36	36	4	3	271,343	267,489
New Jersey	6	2	1	12	13	13	4	1	103,858	102,341
Pennsylvania:										
Lehigh	30	3	3	44	47	47	6	....	449,663	389,969
Schuylkill	26	3	3	37	40	41	4	4	232,225	236,409
U. Susquehanna,	14	3	....	25	25	25	1	4	127,260	129,304
L. Susquehanna,	24	1	4	33	37	37	1	4	159,305	157,403
Maryland	4	....	....	4	4	5	....	....	21,908	20,407
Virginia	1	....	....	1	1	1	....	....	....	4,000
Total	135	13	13	191	204	206	20	16	1,369,812	1,312,754

ANTHRACITE COAL AND COKE.

STATES.	No. of stacks in blast, Jan. 1, 1874,	No. of stacks built in 1872	No. of stacks built in 1873	Whole No. of stacks in 1872	Whole No. of stacks in 1873	Whole No. of stacks, July 1, 1874,	No. of stacks building in 1874	No. of stacks projected in 1874	Make in 1872—Tons of 2,000 lbs	Make in 1873—Tons of 2,000 lbs
Wisconsin	1	....	1	2	3	3	....	....	37,246	35,268
Michigan	1	1	....	1	1	1	....	....	....	8,736
Total	2	1	1	3	4	4	....	....	37,246	44,004
PEAT AND CHARCOAL.										
Michigan	....	1	....	1	1	1	....	....	224	500
CHARCOAL AND BITUMINOUS COAL.										
Virginia	1	....	1	1	2	2	1	....	....	....

RECAPITULATION.

	No. of stacks in blast, Jan. 1, 1874,	No. of stacks built in 1872	No. of stacks built in 1873	Whole No. of stacks in 1872	Whole No. of stacks in 1873	Whole No. of stacks, July 1, 1874,	No. of stacks building in 1874	No. of stacks projected in 1874	Make in 1872—Tons of 2,000 lbs	Make in 1873—Tons of 2,000 lbs
Charcoal	189	6	22	262	284	292	10	19	500,363	574,720
Bituminous coal and coke	83	20	13	154	167	168	22	26	946,913	933,900
Anthracite	135	13	13	191	204	206	20	16	1,369,812	1,312,754
Anthracite coal and coke	2	1	1	3	4	4	....	....	37,246	44,004
Peat and charcoal	....	1	....	1	1	1	....	....	224	500
Charcoal and bituminous coal	1	....	1	1	2	2	1	....	....	2,400
Total	410	41	50	612	662	673	53	61	2,854,558	2,868,278

Pennsylvania, with 262 stacks, makes very nearly one-half of all the pig iron made in the country. Ohio comes next, making one-seventh of the whole product with 88 stacks. New York, with 53 stacks, makes over one-tenth of the whole product. These three States and New Jersey make more than three-fourths of the total product Five western "prairie" States, Indiana, Illinois, Michigan, Wisconsin and Missouri, made thirteen and one-half per cent. of all the pig iron produced in 1872, and twelve and one-half per cent. of all made in 1873. It is a singular fact that South Carolina has eight charcoal furnaces, and that not one of them was in blast in 1872 or 1873. The lack of capital to operate them and the need of repairs are assigned as the reasons for their long suspension. Fuel and ore of an excellent quality are abundant in their vicinity, and it is scarcely possible that they will all remain much longer out of blast. Two other southern States, Alabama and Georgia, are making rapid progress in the manufacture of pig iron, for which they possess truly wonderful facilities.

The production of charcoal pig iron increased nearly 75,000 tons in 1873 over the product of 1872, while there was a decrease in the production of both bituminous and anthracite pig iron. In each year named the quantity of anthracite pig iron produced was nearly one-half of the total product. The average annual product of the furnaces of the country, in net tons, is as follows: Charcoal, 2,024 tons; bituminous coal and coke, 5,592 tons: anthracite, 6,435 tons.

There never having been any record kept of the quantity of pig iron on hand and unsold in this country, from year to year, it is obviously impossible to ascertain accurately the consumption of pig iron in any given year, but a very close approximation can be made by adding the production in that year to the quantity imported. Observing this method, we have the following results for 1872 and 1873:

Home production of pig iron in 1872, net tons	2,854,558
Pig iron imported in 1872, net tons	295,967
Total consumption of pig iron in 1872, net tons	3,150,525
Home production of pig iron in 1873, net tons	2,868,278
Pig iron imported in 1873, net tons	154,780
Total consumption of pig iron in 1873, net tons	3,023,058

In 1872 and 1873 our exports of pig iron to all countries (principally to Canada) were as follows: In 1872, 26,380 cwts.; in 1873, 180,436 cwts. A year ago much was said in public journals of alleged shipments of pig and bar iron to Great Britain, but the most diligent inquiry fails to show that such shipments were ever made, although, as has heretofore been remarked, it is not improbable that English and Scotch founders will yet require large quantities of our charcoal iron for car-wheel purposes. This want, however, will not be created until the American method of making car-wheels becomes more popular in Great Britain than it now is. The British car-wheel, as at present constructed, is not composed, in whole or in part, of charcoal pig iron.

Appended is a table showing the production of the various kinds of pig iron in the United States from 1854 to 1873, both years inclusive. It is compiled from statistics procured by this association. Prior to 1854 no agency existed for the collection of the statistics of the iron trade, but in 1855 this association was organized, and since then it has regularly collected and published these statistics. All that is definitely known of the progress of the iron industry in this country prior to 1854, is embraced in a statement prepared by the Hon. Henry C. Carey, in 1849, and this statement we also append.

PRODUCTION OF PIG IRON FROM 1854 TO 1873.

Years.	Anthracite.	Charcoal.	Bituminous coal and coke.	Total.
1854	339,435	342,298	54,485	736,218
1855	381,866	339,922	62,390	784,178
1856	443,113	370,470	69,554	883,137
1857	390,385	330,321	77,451	798,157
1858	361,430	285,313	58,351	705,094
1859	471,745	284,041	84,841	840,627
1860	519,211	278,331	122,228	919,770
1861	409,229	195,278	127,037	731,544
1862	470,315	186,660	130,687	787,662
1863	577,638	212,005	157,961	947,604
1864	684,018	241,853	210,125	1,135,996
1865	479,558	262,342	189,682	931,582
1866	749,367	332,580	268,396	1,350,343
1867	798,638	344,341	318,647	1,461,626
1868	893,000	370,000	340,000	1,603,000
1869	971,150	392,150	553,341	1,916,641
1870	930,000	365,000	570,000	1,865,000
1871	956,608	385,000	570,000	1,912,608
1872	1,369,812	*500,587	†984,159	2,854,558
1873	1,312,754	‡577,620	§977,904	2,868,278

MR. CAREY'S PIG IRON STATISTICS.

In 1810 the whole number of furnaces in the Union was 153, yielding 54,000 tons of metal, equal to 16 pounds per head of the population.

In 1821 the manufacture was in a state of ruin.

In 1828 the product had reached 130,000 tons, having little more than doubled in eighteen years.

In 1829 it was 142,000. Increase in one year, nearly ten per cent.

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* Includes 224 tons of peat pig iron.

† Includes 37,246 tons of mixed anthracite and coke pig iron.

‡ Includes 500 tons of mixed peat and charcoal pig iron, and 2,400 tons of mixed charcoal and bituminous coal pig iron.

§ Includes 44,004 tons of mixed anthracite and coke pig iron.

In 1830 it was 165,000. Increase in two years, more than twenty-five per cent.

In 1831 it was 191,000. Increase in three years, about fifty per cent.

In 1832 it was 200,000, giving an increase in three years of above sixty per cent.

In 1840 the quantity given by the census was 286,000, but a committee of the Home League, in New York, made it 347,700 tons. Taking the medium of the two, it would give about 315,000 tons, being an increase in eight years of fifty per cent.

In 1842 a large portion of the furnaces were closed, and the product had fallen to probably little more than 200,000, but certainly less than 230,000 tons.

In 1846 it was estimated by the Secretary of the Treasury at 765,000 tons, having trebled in four years.

In 1847 it was supposed to have reached the amount of not less than 800,000 tons.

In 1848 it became stationary.

In 1849, many furnaces being already closed, the production of the present year cannot be estimated above 650,000 tons; but from the accumulation of stock and the difficulty of selling it, it is obvious that the diminution will be greater.

In the twenty years ended with 1873 the growth of the pig iron industry of the United States as compared with that of the United Kingdom of Great Britain was as follows. The ton used in the statistics of the United Kingdom is the gross ton of 2,240 pounds; that used in the statistics of the United States is the net ton of 2,000 pounds.

Year.	U. King. Tons.	U. States. Tons.	Year.	U. King. Tons.	U. States. Tons.
1854	3,069,838	736,218	1864	4,767,901	1,135,996
1855	3,218,151	784,178	1865	4,819,254	931,582
1856	3,586,377	883,137	1866	4,523,897	1,350,343
1857	3,659,477	798,157	1867	4,761,023	1,461,626
1858	3,456,064	705,094	1868	4,970,206	1,603,000
1859	3,712,904	840,627	1869	5,445,757	1,916,641
1860	3,826,752	919,770	1870	5,963,515	1,865,000
1861	3,712,390	731,544	1871	6,627,179	1,912,608
1862	3,943,469	787,662	1872	6,741,929	2,854,558
1863	4,510,040	947,604	1873	6,850,000	2,868,278

Th value of the pig iron product for any year can be approximately ascertained by multiplying the average market value throughout the year of each kind of iron by the year's product, and adding the results thus obtained. In this manner we have carefully calculated the value of the pig iron manufactured in this country during the years 1872 and 1873, and find it to be as follows:

Value of 2,854,558 net tons of pig iron produced in 1872....	$132,649,621
Value of 2,868,278 net tons of pig iron produced in 1873....	118,243,308

In 1854 the production of anthracite pig iron overtook that of charcoal, and in 1869 the production of charcoal pig iron was again overtaken by that of bituminous coal and coke. Since 1854 anthracite has been the leading branch of our pig iron industry, and since 1869 charcoal has been the least productive of all branches.

BLAST FURNACES OF PENNSYLVANIA.

LEHIGH VALLEY ANTHRACITE.

Allentown iron works, Allentown iron company, Allentown, Lehigh county. Office, 105 Walnut street, Philadelphia. Five stacks: one 45x12, one 45x14, two 52x16, and one 60x17; weekly capacity, 1,050 tons.

Allentown rolling mill company, Allentown. Office, 303 Walnut street, Philadelphia. Two stacks, each 65x16. Formerly owned by Roberts iron company.

Bethlehem iron works, Bethlehem iron company, Bethlehem, Northampton county. Three stacks; built in 1863, 1867 and 1868; dimensions, 62 feet 5 inches x15, 45x15 and 50x14 feet 5 inches. Three stacks building, one of which, now almost finished, will make spiegeleisen from zinc residuum.

Carbon iron works, Carbon iron company, Parryville, Carbon county. Three stacks, 52x12, 52x16 and 65x18; built in 1855, 1864 and 1869, respectively.

Coleraine iron works, W. T. Carter & Co , Coleraine iron company, Redington, Northampton county. Office, 103 Walnut street, Philadelphia. Two stacks, each 60x17; one built in 1869, the other in 1872; combined weekly capacity, 500 tons.

Crane iron works, Crane iron company, Catasauqua, Lehigh county. Office, 224 South Fourth street, Philadelphia. Six stacks, 45x11, 45x13, 55x16, 55x17½, 55x17½ and 60x17½; built in 1840, 1842, 1846, 1850, 1850, and 1867, respectively.

Durham iron works, Cooper, Hewitt & Co., Riegelsville, Bucks county. Office, 17 Burling Slip, New York. Three stacks: two, 48x13 and 50x15, built in 1848 and 1851; another stack, 75x20, building in 1874.

Emaus furnace, C. H. Nimson, lessee, Allentown, Lehigh county. One stack, 70x16; first put in blast October 10, 1872. Owned by Emaus iron company, S. Gross Fry, president, 258 South Third street, Philadelphia.

Glendon iron works, Glendon iron company, John C. Lowell, president, Wm. Firmstone, superintendent, Easton, Northampton county. Five stacks, 50x18, 50x12, 50x16, 50x13, and 72x18; built in 1843, 1844, 1850, 1852, and 1869, respectively. No. 1 was rebuilt in 1849. These furnaces are at Glendon, near Easton, except No. 4, which is situated at South Easton. No. 2 and No. 4 are blown by water power.

Keystone furnace, Keystone iron company, (E. H. Green, of Easton, president,) near Glendon, Northampton county. One stack; in course of erection.

Lehigh iron works, Lehigh iron company, Allentown, Lehigh county. Two stacks 55x16 and 60x17; the second stack was first put in blast in October, 1872.

Lehigh Valley furnaces, Lehigh Valley iron company, Coplay, Lehigh county. Three stacks, 60x14, 55x16 and 55x16; built in 1853, 1862 and 1868 respectively.

Lock Ridge furnaces, Thomas iron company, Alburtis, Lehigh county. Two stacks, each 55x15; built in 1867 and 1869.

Millerstown iron company, A. A. M'Hose, superintendent, Macungie, Lehigh county. One stack 65x16; completed in June, 1874.

Northampton furnace, Bethlehem iron company, Freemansburg, Northampton county. Office at Bethlehem. One stack, 65x16; built in 1872; went in blast July 18, 1873.

North Penn furnace North Penn iron company, Bingen, Northampton county. One stack, 63x18.

Saucon iron works, Saucon iron company, Geo. W. Whitaker, president, Hellertown, Northampton county. Two stacks, each 50x16; built in 1868 and 1869.

Thomas iron works, Thomas iron company, Hokendauqua, Lehigh county. Six stacks, two 60x18, two 55x18, and two 60x20; four were built from 1855 to 1862; No. 5 first blew in on September, 15, 1873, and the sixth is nearing completion.

Uhler iron works, Peter Uhler, Easton, Northampton county. Furnace at Glendon. One stack, 65x14; built in 1871 This was formerly Easton furnace.

SCHUYLKILL VALLEY ANTHRACITE.

Anvil furnace, Pottstown iron company, Pottstown, Montgomery county. One stack, 50x16; built in 1867.

Bechtelsville, Berks county. One stack; building in 1874.

East Penn iron company, Lyons, Berks county. Building two stacks, each 48x12½.

Edgehill furnace, Edgehill iron company, Fitzwatertown, Montgomery county. Office, No 43 North Water street, Philadelphia. One stack, 65x16; built in 1872.

Hampton furnace, E. & G. Brooke, Birdsboro', Berks county. One stack, 30x8; built in 1846. Changed recently from charcoal.

Henry Clay furnaces, Eckert & Bro., Reading, Berks county. Two stacks, 45x12; built in 1844; total weekly capacity, 300 tons.

Keystone furnaces of Reading, Keystone furnace company, Reading, Berks county. Two stacks; one, 50x15, built in 1870; the other, 50x14, built in 1872–3, blown in during June, 1873.

Keystone furnaces, E. & G. Brooke, Birdsboro', Berks county. Three stacks; two, 43½x12 and 55x15, built in 1853 and 1871, respectively; one stack, 60x16, built in 1873, has a capacity of 225 tons per week.

Kutztown furnace, Kutztown iron company, Kutztown, Berks county. Thomas Wren, president, John Humbert, secretary. One stack, 54x15½, now building and to be completed in 1874.

Leesport furnace, Leesport iron company, Leesport, Berks county. One stack, 45x14; built in 1853; weekly capacity, 200 tons.

Lucinda furnace, Schall & Co., Norristown Montgomery county. One stack, 39x12; built in 1856.

Merion furnaces, J. B. Moorhead & Co., Conshohocken, Montogomery county. Office, 136 South Third street, Philadelphia. Two stacks; Merion furnace, 40x12½; built in 1847; Elizabeth furnace, 50x15, built in 1872, went in blast October 24, 1872. Capacity about 350 tons per week.

Minersville furnace, Minersville coal and iron company, Jacob S. Lawrence, president, Frank Heisler, secretary, Minersville, Schuylkill county. One stack, 55x15; built in 1872–3; blown in September 5, 1873; bell-and-hopper top; iron stack; weekly capacity, 200 tons.

Monocacy furnace, Wright, Cooke & Co., Monocacy, Berks county. Office, 214 Walnut street, Philadelphia. One stack, 50x14; annual capacity, 7,000 tons.

Montgomery furnace, Montgomery iron company, Port Kennedy, Montgomery county. Office, 228 Dock street, Philadelphia. One stack, 50x14; built in 1854.

Moselem furnace, Moselem iron company, Nora, Berks county. Office, 228 Dock street, Philadelphia. One stack, 48x12½; rebuilt in 1872.

Mount Laurel furnace, W. H. Clymer & Co., Temple, Berks county. One stack, 50x11; changed from charcoal to anthracite.

Norristown iron works, James Hooven & Sons, Norristown Montgomery county. One stack, 55x16; built in 1869.

Philadelphia furnace, S. Robbins & Son, Beach and Vienna streets, Kensington, Philadelphia. One stack, 58x14; built in 1873,

Phœnix iron works, Phœnix iron company, Phœnixville, Chester county. Office, 410 Walnut street, Philadelphia. Three stacks, 48x14, 36x15, and 50x14; two built in 1845, and the third in 1849.

Pioneer furnaces, Atkins & Bro., Pottsville, Schuylkill county. Three stacks, 50x12, 50x13, and 55x15; built in 1853, 1866 and 1872, respectively.

Plymouth furnaces, S. Fulton & Co., Conshohocken, Montgomery county. Office, 242 South Third street, Philadelphia. Two stacks, 44x15 and 42x 15; built in 1845 and 1864, respectively.

Port Carbon furnace, Schuylkill iron company, Port Carbon, Schuylkill county. One stack, 52x13⅔; built in 1872 and put in blast in September, 1872.

Reading furnaces, Seyfert, M'Manus & Co., Reading, Berks county. Office, 631 Chestnut street, Philadelphia. Two stacks; one, 55x16, built in 1854; the other, 55x15, first blown in on October 5, 1874. The old stack was refitted in 1870. Both stacks have bell-and-hopper top.

Ringgold iron and coal company, New Ringgold, Schuylkill county. One stack, 55x14; built in 1873; blown in February 28, 1874.

Robesonia furnaces, White & Ferguson, Robesonia, Berks county. Two stacks, 30x9 and 38x13; built in 1845 and 1858, respectively.

St. Clair furnace, James Lanigan, Pottsville, Schuylkill county. Office, 329 Walnut street, Philadelphia. One stack, 55x16; bell-and-hopper top.

Swede furnaces, James Lanigan, Swedeland, Montgomery county. Two stacks, each 60x16; built from 1850 to 1855.

Topton furnace, Topton iron company, Levi H. Leiss, president, Reading, Berks county. One stack, 55x16; built in 1873.

Temple furnace, Temple iron company, Temple, Berks county. One stack, 45x13½; built in 1867.

Wm. Penn furnaces, D. O. & H. S. Hitner, Conshohocken, Montgomery county. Three stacks, 35x12, 50x14, and 40x12½; built in 1844, 1845, and 1854.

PROJECTED.

A joint stock company has been formed for the purpose of erecting a furnace at Royer's Ford, Chester county.

Warwick furnace, Warwick iron company, Pottstown, Montgomery county. This company own a rich mine of magnetic ore in Hereford township, Berks county, which they call "steel ore," and they propose to erect a furnace 52x16, of 15,000 tons capacity.

One stack is projected at Fleetwood, Berks county, and another at Morgantown.

UPPER SUSQUEHANNA ANTHRACITE.

Bloom furnace, Wm. Neal & Sons, Bloomsburg, Columbia county. One stack, 50x14; built in 1854.

Chulasky furnace, Waterman & Beaver, Chulasky, Northumberland county. One stack, 42x15; built in 1846.

Columbia furnaces, Grove Brothers, Danville, Montour county. Two stacks, 39x14 and 50x14; built in 1840 and 1860, respectively.

Duncannon furnace, Duncannon iron company, Duncannon, Perry county. Office, 122 Race street, Philadelphia. One stack, 40x14; built in 1853.

Irondale furnaces, Bloomsburg iron company, Bloomsburg, Columbia county. Office, 122 Race street, Philadelphia. Two stacks, 36x12; built in 1844 and 1845.

Juniata furnace, Williamsburg manufacturing company, Williamsburg, Blair county. One stack, 28x8; built in 1857; annual capacity, 2,500 tons.

Lackawanna iron works, Lackawanna iron and coal company, Edward C. Lynde, secretary, Scranton, Luzerne county. Five stacks; one built in 1872; two are 50x18; one 80x18, and one 50x19; the new stack is 67 feet high with 23-foot boshes.

Lewistown furnaces, Glamorgan iron company, Lewistown, Mifflin county. Office, 430 Walnut street, Philadelphia, and 265 South Fourth street, Philadelphia. Two stacks, 45x12 and 54x14½; one, built in 1853, one built in 1872, put in blast in December, 1872.

Marshall furnace, Marshall iron company, Newport, Perry county. One stack, 50x14; built in 1872.

Mansfield furnace, Shoaber & Johnson, Reading, Pa. Furnace at Mansfield, Tioga county. Part of Tioga iron works, W. G. Lutz, superintendent. One stack, 36x10; built in 1854.

Marsh, Jas. S., & Co., Northumberland, Northumberland county. One stack, 61x18, in course of erection.

Matilda furnace, B. B. Thomas, Matilda furnace, Mifflin county. One stack, 43x10; built in 1838.

Pennsylvania iron works, Waterman & Beaver, Danville, Montour county. Office, 407 Library street, Philadelphia. Three stacks; two, 50x16, and one 34x14; built in 1842.

Rebecca furnace, Johnston & Hemphill, Martinsburg, Blair county. One stack, 30x8½; built in 1820.

Union furnace, Beaver, Marsh & Co., Winfield, Union county. One stack, 50x15; built in 1854; annual capacity, 7,000 tons.

Union furnaces, Fowler & Krebs, lessees, Danville, Montour county. Owned by Hancock steel and iron company. Two stacks, 38x14 and 60x16; built in 1867; estimated annual capacity, 14,000 tons. These furnaces were formerly known as the Danville furnaces and afterwards as the National iron company's furnaces.

PROJECTED.

Wistar iron and coal company, Wistar, Clinton county. Dr. E. Eldridge, Elmira, N. Y., president.

One stack is projected by Messrs. Cruikshank, Freeburg, Snyder county.

Another is projected at Mansfield, Tioga county.

LOWER SUSQUEHANNA ANTHRACITE.

Aurora furnace, Wrightsville iron company, Wrightsville, York county. One stack, 38x14; built in 1867.

Baldwin furnace, Pennsylvania steel company, Steel Works P. O., Dauphin county. Office, 216 South Fourth street, Philadelphia. One stack, 60x14; built in 1872–3; put in blast in October, 1873.

Bird Coleman furnace, R. W. Coleman's heirs, Cornwall, Lebanon county. One stack, 52x15; built in 1872–3.

Cameron furnace, Cameron furnace company, Middletown, Dauphin county. One stack, 35x13⅝; built in 1857.

Chestnut Hill furnaces, Chestnut Hill iron ore company, Columbia, Lancaster county. Three stacks.

Chiques furnaces, E. Haldeman & Co., Chiques, Lancaster county. Two stacks, 45x12 and 45x13; built in 1845 and 1854.

Conestoga furnace, Thomas & Peacock, Lancaster, Lancaster county. Office, 430 Walnut street, Philadelphia. One stack, 38x10; built in 1846; weekly capacity, 110 tons.

Cornwall anthracite furnaces, R. W. Coleman's Heirs & Co., Cornwall, Lebanon county. Two stacks, each 38x12; built in 1850 and 1854.

Dauphin furnace, George Malin, 228 Dock street, Philadelphia; furnace at Dauphin, Dauphin county. One stack; re-built in 1872.

Dock iron works, Gillard Dock & Co., Harrisburg, Dauphin county. One stack, 30x7; built in 1873–4.

Donaghmore furnace, R. W. Coleman's heirs, Lebanon, Lebanon county. One stack, 38½x13½; built in 1855.

Donegal furnace, Benson & Cottrell, Marietta, Lancaster county, addressed at Columbia. One stack, 36x12; built in 1848; daily yield, 16 tons.

Harrisburg furnace, Price Bros., Harrisburg, Dauphin county. One stack, 39x12; built in 1844; formerly Porter furnace.

Kauffman furnace, C. S. Kauffman, Columbia, Lancaster county. One stack, 36x12½; built in 1855.

Lebanon furnaces, G. D. Coleman, Lebanon, Lebanon county. Three stacks, 50x14, 36x12 and 55x16; built in 1846 (reconstructed in 1868,) 1847 and 1872–3, respectively; the new furnace was put in blast in August, 1873.

Lebanon Valley furnace, J. & R. Meily, Lebanon, Lebanon county. One stack, 38x12; built in 1868.

Lochiel furnace, Lochiel rolling mill company, A. J. Dull, manager, Harrisburg, Dauphin county. One stack, 52x14; built in 1873; put in blast in April, 1873; weekly capacity, 150 tons.

Marietta furnaces, H. M. Watts & Sons, Marietta, Lancaster county. Two stacks, 45x12 and 47x12; built in 1849 and 1850.

Middletown furnace, Meily & Nutting, Middletown, Dauphin county. One stack, 40x12½; built in 1853.

Musselman furnace, H. Musselman & Sons, Marietta, Lancaster county. One stack, 40x13; daily capacity, 20 tons.

North Cornwall furnace, Mrs. M. C. Freeman, North Cornwall, Lebanon county. One stack, 52x15; built in 1873–4.

Paxton furnaces, M'Cormick & Co., Harrisburg, Dauphin county. Two stacks, 43x14 and 60x14; one built in 1872; weekly capacity, 300 tons.

Safe Harbor furnace, Safe Harbor iron company, Samuel M. Wright, superintendent, Safe Harbor, Lancaster county. One stack, 45x14; built in 1848; annual capacity, 8,000 tons; not in blast since 1865; not to be put in operation until the Columbia and Port Deposit railroad, now being made, is completed.

Sheridan furnaces, Wm. M. Kaufman & Co., Sheridan, Lebanon county. Two stacks; one, an old furnace, and the other, 55x16, built in 1874.

Stanhope furnace, Wynkoop Bros., Pine Grove, Schuylkill county. One stack, 33x10.

St. Charles furnace, C. B. Grubb & Son, Columbia, Lancaster county. Addressed at Lancaster. Two stacks, 39x11 and 42x14; built in 1845 and 1853. The smaller stack was formerly called Henry Clay furnace.

Union Deposit furnace, Henry Landis, Union Deposit, Dauphin county. One stack, 39½x11; built in 1854.

Wister furnace, J. & J. Wister, Harrisburg Dauphin county. One stack 45x14; built in 1867.

PROJECTED.

Meyerstown, Lebanon county. P. L. Weimer, Lebanon, promoter. One stack each is projected by C. B. Grubb & Son, and Columbia steel and iron works, at Columbia, Lancaster county.

C. W. Ahl & Sons intend to build one stack, 60x15, weekly capacity, 150 tons, iron frame and jacket, at Boiling Springs, Cumberland county. Another furnace is talked of at Mechanicsburg, Cumberland county.

SHENANGO VALLEY—BITUMINOUS COAL OR COKE.

Allen furnace, Henderson, Allen & Co., Sharpsville, Mercer county. One stack, 50x12; built in 1870; annual capacity 9,000 tons.

Clara furnace, Crowther iron company, New Castle, Lawrence county. Coke. One stack, 60x16 ; annual capacity, 16,000 tons ; built in 1872 ; put in blast in May, 1872.

Douglas furnaces, Pierce, Kelley & Co., Sharpsville, Mercer county. Two stacks ; one stack, 50x12, built in 1871 ; one stack, 50x14, built in 1872 ; combined capacity, 20,000 tons.

Erie furnace, Rawle, Noble & Co., Erie, Erie county. One stack, 55x12, built in 1869 ; annual capacity, 9,000 tons.

Samuel Kimberly, Etna iron company, New Castle, Lawrence county. Two stacks, built in 1868, each 50x12 ; combined annual capacity, 18,000 tons.

Fannie furnace, Wheeler iron company, West Middlesex, Mercer county. One stack, 51½x13½ ; built in 1873 ; put in blast October 13, 1873 ; annual capacity, 9,000 tons.

Keel Ridge furnace, Samuel Kimberly, Sharon, Mercer county. One stack, 55x13⅔ ; built in 1869 ; annual capacity, 12,000 tons.

Middlesex furnace, Middlesex furnace company, Middlesex, Mercer county. One stack, 46x12 ; annual capacity, 6,000 tons.

Mt. Hickory furnaces, Mt. Hickory iron company, Sharpsville, Mercer county. Two stacks, each 50x12 ; built in 1869 ; combined annual capacity, 18,000 tons.

Neshannock furnace, Neshannock iron company, New Castle, Lawrence county. One stack, 60x14 ; built in 1872 ; annual capacity, 12,000 tons.

Onondago furnace, Onondago iron company, New Castle, Lawrence county. One stack in course of erection ; to be completed in 1874.

Ormsby furnace, Ormsby iron company, Sharpsville, Mercer county. One stack, 50x12 ; built in 1872 ; blown in February 15, 1873 ; annual capacity, 9,000 tons.

Sharon furnace, Boyce, Rawle & Co., Sharon Mercer county. One stack, 46x10⅓ ; built in 1845 ; annual capacity, 9,000 tons.

Sharpsville furnace, James Pierce & Sons, Sharpsville, Mercer county. One stack, 50x11 ; annual capacity, 9,000 tons.

Shenango furnaces, Shenango furnace company, Middlesex, Mercer county. Two stacks, each 46x10, built in 1860 ; combined annual capacity, 17,000 tons.

Shenango iron works, Sophia, Little Pet and Rowena furnaces, Reis, Brown & Berger, New Castle, Lawrence county. Three stacks ; two, 65x13, and 40x9, built in 1872 and 1853, respectively ; one, 77x20, completed in 1872, went in blast in June, 1873 ; combined annual capacity, 40,000 tons. The Sophia, now 65x13, will shortly be enlarged to 15-foot bosh.

Spearman furnaces, Spearman iron company, Sharpsville, Mercer county. One stack, 50x14, annual capacity, 10,000 tons, built in 1872; one stack now building.

Stewart furnaces, Stewart iron company, Sharon, Mercer county. Formerly Valley furnaces. Two stacks, one 51x12, built in 1870, and one 55x14, built in 1872; combined annual capacity, 20,000 tons.

Wampum furnace, Wampum furnace company, Wampum, Lawrence county, one stack, 50x13; annual capacity, 8,000 tons.

Westerman furnaces, Westerman iron company, Sharon, Mercer county, two stacks, each 50x13, built in 1865 and 1866; combined annual capacity, 18,000 tons.

Wheatland furnaces, James Wood's Sons & Co., Wheatland, Mercer county; four stacks, built from 1860 to 1865, one 46x9, and three 46x12; combined annual capacity, 30,000 tons. Firm is insolvent. One stack has been leased by Kimberly, Carnes & Co., and the other three stacks have been leased by Herron, Ohl & Co., who have run them from March, 1873.

PROJECTED.

Wampum furnace company, Wampum, Lawrence county, intend to build another stack in 1874.

ALLEGHENY COUNTY—COKE.

Clinton furnace, Graff, Bennett & Co., Pittsburg, Allegheny county. One stack, 45x12, built in 1859. Annual product, 12,000 tons.

Eliza furnaces, Laughlins & Co., Pittsburg, Allegheny county. Two stacks, built in 1861; originally 45x12, but in 1873 and 1874 they were enlarged to 60x17, with a yearly capacity of 36,000 tons.

Enterprise furnace, Enterprise furnace company, (P. O. Pittsburg,) Hite's station. One stack, built in 1872, torn down, and now rebuilding.

Isabella furnaces, Isabella furnace company, Etna, Allegheny county. Two stacks; built in 1872; one 75x18, and the other 75x20; annual capacity, 56,000 tons.

Lucy furnace, Kloman & Carnegie Bros., Pittsburg, Allegheny county. One stack, 75x20; first put in blast in May, 1872; annual capacity, 28,000 tons.

Shoenberger furnaces, Shoenberger, Blair & Co., Pittsburg, Allegheny county. Two stacks, 47½x13, built in 1864; annual capacity, 30,000 tons.

Soho furnace, Moorhead, M'Cleane & Co., Pittsburg, Allegheny county. One stack, 65x18, built in 1872; put in blast in November, 1872; annual capacity, 22,000 tons.

Superior furnaces, Harbaugh, Mathias & Owens, Woods Run, Allegheny county. Addressed at Pittsburg. Two stacks, 45x12; built in 1862–3; annual capacity, 22,000 tons.

PROJECTED.

Isaac Jones, M'Keesport, Allegheny county. One stack.

RAW BITUMINOUS COAL OR COKE—STATE.

Allegheny furnace, S. C. Baker, Altoona, Blair county. Coke. One stack, 32x9; built in 1811.

Bennington furnace, Blair iron and coal company, Bennington furnace, Blair county. Addressed at Hollidaysburg and at the Philadelphia office 218 South Fourth street. One stack, 40x11; built in 1856. Coke.

Blair iron and coal company, Hollidaysburg, Blair county. Coke. Two stacks, 43x12 and 38x10½; built in 1856.

Brady's Bend furnaces, Brady's Bend iron company, Brady's Bend, Armstrong county. Four stacks, 44x9, 44x10½, 50x14 and 50x13½; built from 1842 to 1845.

Cambria iron works, Cambria iron company, Johnstown, Cambria county. Office, 218 South Fourth street, Philadelphia. Coke. Four stacks at Johnstown: three 48x13 and one 70x15; built from 1852 to 1854; one stack at Conemaugh station, 45x12; built in 1857. A large furnace 75x20 is now building at Johnstown and another of the same size is contemplated.

Charlotte furnace, Everson, Knap & Co., Scottdale, Westmoreland county. One stack 65x16½; coke; built in 1872–3; daily capacity 45 tons; put in blast October 14, 1873.

Dunbar furnace, Dunbar iron company, Dunbar, Fayette county. One stack 58x15½; built in 1870; average daily run, 50 tons.

Elizabeth furnace, Martin Bell & Co., Sabbath Rest, Blair county. Coke. One stack 32x9; went into blast in the fall of 1872 after a long rest.

Fairchance furnace, Fairchance iron company, Uniontown, Fayette county. Coke. One stack 45x13; built in 1784 and rebuilt in 1871.

Frankstown furnace, Blair iron and coal company, Frankstown, Blair county. Coke. One stack 40x10; rebuilt in 1872 and put in blast November 1, 1872. Gap furnace, Johnston & Hemphill, M'Kee, Blair county. One stack 36x10.

Howard furnace, Lauth, Thomas & Co., Howard, Centre county. Coke. One stack 33x8; repaired in 1872; weekly capacity 100 tons.

Kemble furnaces, Kemble coal and iron company, Riddlesburg, Bedford county. Office 20 Nassau street, New York, address P. O. box 157. Two stacks 60x14; built in 1869 and 1871.

Mahoning furnace, J. A. Colwell & Co., Oakland, Armstrong county. One stack 38x10½; built in 1848.

Monticello furnace, M'Knight, Porter & Co., Monticello, Armstrong county. One stack 52½x11; built in 1860.

Pine Creek furnace, Brown & Mosgrove, Kittanning, Armstrong county. One stack, 40x11 ; built in 1846.

Red Bank furnace, Reynolds & Moorhead, Red Bank Furnace, Clarion county. Coke. One stack, 40x11 ; built in 1859.

Rock Hill iron and coal company, Orbisonia, Huntingdon county. Office, 320 Walnut street, Philadelphia. Building two stacks, each 65x17.

Rodman furnaces, Charles Knap & Co., Roaring Spring, Blair county. Two stacks, 42x9 and 45x14 ; coke.

Sligo furnace, J. P. Lyon & Co., Sligo, Clarion county. Coke. One stack, 32x9 ; not in blast in 1872 and 1873 ; re-building in 1873–4.

Stewardson furnace, F. B. & A. Laughlin, Orrsville, Armstrong county. Coke. One stack, 43½x11.

PROJECTED.

A company has been organized at Corry, Erie county, and the erection of a furnace of great capacity is contemplated.

Several furnaces are projected in Southampton township, Bedford county.

CHARCOAL—STATE.

Augusta furnace, George Clever, Cleversburg, Cumberland county. One stack ; not in blast for four years ; to be re-built and put in blast by the present owner in 1874.

Barre Forge furnace, Dorris & Co., Barre Forge, Huntingdon county. One stack, 33x9 ; iron made into blooms for boiler plate.

Big Pond furnace, Philadelphia and Reading coal and iron company, Newville, Cumberland county. One stack, 33x8½ ; built in 1836.

Caledonia furnace, Thaddeus Stevens' estate, Graeffenburg, Adams county. One stack, 33x8 ; built in 1837 ; not in blast in 1872 and 1873 ; furnace in Franklin county.

Carlisle furnace, C. W. & D. V. Ahl, Boiling Springs, Cumberland county. Office at Carlisle. One stack, 28x8 ; built in 1790 and re-built in 1810 ; hot and cold blast ; water power.

Carrick furnace, R. M. Shalter, Fannettsburg, Franklin county. One stack, 30x8 ; weekly capacity, 35 tons.

Charcoal furnace, Foltz, Jordan & Co., New Castle, Lawrence county. One stack.

Chestnut Grove furnace, Wm. Hildebrand, Idaville, Adams county. One stack, 33x8½ ; built in 1830.

Cornwall furnace, R. W. Coleman's heirs, Cornwall, Lebanon county. One stack, 31x8 ; built in 1745.

Cumberland furnace, Ahl & Bro., Dickinson, Cumberland county. Out of blast for many years ; recently purchased by Ahl & Bro., who intend to operate the mines in its vicinity and perhaps fit up the furnace.

Eagle furnace, C. R. & J. Curtin, Milesburg, Centre county. One stack, 30x8 ; built in 1848.

East Penn furnace, John Balliet, Parryville, Carbon county. One stack, 28x7½ ; cold blast ; water power.

Emma furnace, Logan iron and steel company, Lewistown, Mifflin county. Office, 218 South Fourth street, Philadelphia. One stack, 34x9 ; warm and cold blast ; steam power.

Etna furnace, Geo. D. Isett & Bro., Yellow Springs, Blair county. One stack, 31x8 ; cold blast ; built in 1808.

Franklin furnace, Hunter & Springer, St. Thomas, Franklin county. One stack, 32x8½ ; built in 1828 , cold blast ; steam power.

Greenwood furnaces, Logan iron and steel company, Greenwood works, Huntingdon county. Office, 218 South Fourth street, Philadelphia. Two stacks, 30x8½, and 32x8½ ; cold blast , steam power.

Hecla furnace, M'Coy & Linn, Milesburg, Centre county. One stack, 32x9 ; built in 1820 ; cold blast ; water power.

Helen furnace, John Rice, Richmond furnace, Franklin county. One stack, 36x9 ; hot blast ; steam power ; formerly Mt. Pleasant iron works. It is reported this furnace will soon be changed to anthracite.

Hope furnace, Jos. S. Brown & Co., Rose Point, Lawrence county. One stack, 28x8 ; built in 1868 ; cold blast ; steam power.

Hopewell furnace, Clingan & Buckley, Douglassville, Berks county. One stack, 30x7 ; very old.

Hopewell furnace, Lowry, Eichelberger & Co., Hopewell, Bedford county. One stack, 30x8½ ; built in 1800.

Howard furnace, Lauth, Thomas & Co., Howard, Centre county. One stack, 31x8½ ; built in 1833 ; cold blast ; water power ; undergoing repairs in 1872 ; put in blast in June, 1873.

Isabella furnace, Smith & Bros., Barneston, Chester county. One stack, 33x8 ; built in 1835 and rebuilt in 1864 ; cold blast ; water power.

Jefferson furnace, John M. Kaufman & Bros., Auburn, Schuylkill county. One stack, 31x7 ; built in 1864 ; cold blast ; water power.

Joanna furnace, L. B. Smith & Co., Joanna furnace, Berks county. One stack, 30x8 ; built in 1792, and rebuilt in 1847 ; cold blast ; water and steam power.

Laura furnace, W. A. Taylor & Co., Millerstown, Perry county. One stack, 35x9 ; built in 1873 ; cold blast ; water power ; weekly capacity, 35 tons.

Logan furnace, Valentine & Milliken, Bellefonte, Centre county. One stack, 32x8 ; cold blast ; water power.

Madison furnace, J. P. Lyon & Co., Sligo, Clarion county. One stack ; cold blast.

Maiden Creek furnace, heirs of George Merkel, Lenhartsville, Berks county. One stack 35x9; built in 1854; cold blast; water and steam power.

Manada furnace, Grubbs & Bland, Swatara Station, Dauphin county. One stack 31x8; built in 1836; cold blast; water power.

Mont Alto furnace, Mont Alto iron company, Mont Alto, Franklin county. One stack 37x9½; built in 1808; warm blast; steam power; bloom forge connected with the furnace.

Mount Hope furnace, A. B. Grubb, Mount Hope, Lancaster county. One stack 27x7; built in 1785; not in blast since 1871.

Mount Penn furnace, Hunsicker & Co., Reading, Berks county. One stack 30x8½; built in 1830; cold blast; water power.

Oley furnace, W. H. Clymer & Co., Temple, Berks county. One stack 30x9; built in 1772.

Pennsylvania furnace, Lyon, Shorb & Co., Graysville, Huntingdon county. One stack 32x9; built in 1813.

Pine Grove furnace, South Mountain iron company, Mountain Creek, Cumberland county. One stack 33x8½.

Sarah furnace, Essington Hammond, Sarah, Blair county. One stack 33x8; built in 1824; cold blast; capacity 40 tons per week.

Springfield furnace, John Royer, Springfield Furnace, Blair county. One stack 31x8½; built in 1815; warm blast; water power.

Spring Hill furnace, Fairchance iron company, Smithfield, Fayette county. One stack 35x9; built in 1805, rebuilt in 1854 and repaired in 1873.

Washington iron works, Barlow & Day, Lamar, Clinton county. One stack 30x7; built in 1809.

York furnace, John Bair & Co., York Furnace, York county. One stack 32x8; built in 1830; cold blast; water power.

ROLLING MILLS OF PENNSYLVANIA.

EASTERN DISTRICT.

Allentown rolling mill company, consolidation of Allentown rolling mill, Lehigh rolling mill, and Roberts iron company. Works at Allentown, Lehigh county. Office, 303 Walnut street, Philadelphia. Built in 1860; one single and 23 double puddling furnaces, 3 single and 7 double heating furnaces, and 8 trains of rolls; product, steam and street rails, from 16 pounds upwards, fish plates, merchant bars, spikes, bolts, nuts, rivets, axles, machinery, bridge work, and mine and flat cars.

Bethlehem iron company, Bethlehem, Northampton county. Built in 1863. Mill No. 1, 14 double puddling furnaces, 9 heating furnaces, and 3 trains of rolls; product, railroad iron; annual capacity, 22,500 net tons; average annual production, 18,000 tons. Mill No. 2, 24 and 26-inch rail trains, 124 feet 9 inches in length from centre to centre of engines; engines at each end, north, 48x46 stroke, south, 56x48 stroke; one 31-inch bloom train, with one engine 36-inch diameter and 60-inch stroke. Steel works, 2 converters, equal to 120 tons Bessemer steel per day, cupola engine, 18 by 48, blowing engine, 36x60, 7 Siemens's regenerative gas furnaces for heating ingots and blooms, 4 cupola furnaces, and 2 spiegel melting furnaces.

Birdsboro' nail works, E. & G. Brooke, Birdsboro', Berks county. Built in 1848; seven double puddling furnaces, 2 scrap and 3 heating furnaces, 72 nail machines, and 2 trains of rolls; steam and water power; product, nails, puddle bar and scrap iron.

Blandon iron works, Blandon iron company, Blandon, Berks county. Built in 1867; one double and 3 single puddling furnaces, 1 heating furnace, and 2 trains of rolls; product, skelp and band iron; annual capacity, 2,500 net tons. Average yearly product, 1,800 tons.

Brandywine rolling mills, S. & B. R. Hatfield, Coatesville, Chester county. Product, plate iron.

Bristol rolling mill, Owen, Jones & Co., Bristol, Berks county. Leased by present operators in January, 1873; two single puddling furnaces, 3 heating furnaces, one train bar rolls, 2 trains sheet rolls, and one hammer; product, sheet and flue iron; annual capacity, 3,000 net tons.

Catasauqua manufacturing company, Catasauqua, Lehigh county. Two mills; Catasauqua and Ferndale; organized in 1864; 28 single puddling furnaces, 9 heating furnaces, 7 trains of rolls, and one 10-ton hammer; product, merchant bar, small T rail, band, and large size skelp iron, boiler plate, tank and chute iron; annual capacity, 20,000 net tons.

Chester, Delaware county. John Roach & Co. are building a plate mill, in 1874.

Conshohocken, Pennsylvania and Corliss iron works, J. Wood & Bros., Conshohocken, Montgomery county. Office, 223 North Second street, Philadelphia. Built in 1832, 1852 and 1864, respectively; 5 double puddling furnaces, 7 heating furnaces and 7 trains of rolls; steam and water power; product, plate and sheet iron; annual capacity, 6,000 net tons; average yearly production, 4,500 tons.

Delaware rolling mills, Hughes & Patterson, Richmond and Otis streets, Philadelphia. Built in 1870; 6 single puddling furnaces, 4 heating furnaces and 3 trains of rolls; product, bar iron; annual capacity, 8,000 net tons.

Easton sheet iron works, Samuel Oliver & Son, Easton, Northampton county. Put in operation Februay 1, 1872; 2 single puddling furnaces, one heating furnace, one sheet furnace, one annealing furnace and one train of rolls, consisting of one pair sheet rolls and one pair bar rolls; product, sheet iron; annual capacity, 1,000 net tons. Production sold by Marshall Lefferts, Jr., 90 Beekman street, New York.

Fair Hill forge and rolling mill, Gaulbert, Morgan & Caskey, York and America streets, Philadelphia. Built in 1854; 1 single and 2 double puddling furnaces, 3 heating furnaces, 2 trains of rolls and 1 hammer; product, merchant bar; annual capacity, 3,000 net tons.

Fort Allen iron works, Weissport, Carbon county. Ezra Bertolet, agent, 420 Walnut street, Philadelphia. Rebuilt in 1872; 1 single and 2 double puddling furnaces, 2 heating furnaces, one squeezer and 2 trains of rolls; one 9 and one 16-inch train; product, guide and bar iron; annual capacity, 3,000 tons. Now idle.

Fulton rolling mill, S. Fulton & Co., Norristown, Montgomery county. Built in 1861; 11 double puddling furnaces and 1 train puddle rolls; product, puddled bar; annual capacity, 15,000 net tons; average make, 5,550 tons.

Gibralter iron works, S. Seyfert & Co., Reading. Built in 1846; 2 heating furnaces, 2 hammers and 1 train of rolls; water power; product, boiler plate, boiler tube iron and blooms; annual capacity, 1,500 net tons plate iron and 1,000 tons blooms.

Glen iron works, Allentown, Lehigh county. First put in operation in 1870; 6 double and 2 single puddling furnaces, 3 heating furnaces and 3 trains of rolls, one 8½ and two 15-inch; product, bar iron and small T rails; annual capacity, 7,500 net tons; average make, 5,400 tons.

Gray's Ferry iron works, Edward S. Buckley, 228½ Walnut street, Philadelphia. Built in 1858; 3 double puddling furnaces, 4 heating furnaces, 2 trains of rolls and 2 hammers; product, charcoal blooms and plate iron; annual capacity, 3,600 net tons plate and 600 tons blooms; average annual production, 3,000 tons plate and 500 tons blooms.

Hamburg rolling mills, Hamburg iron company, Hamburg, Berks county. Three double and 2 single puddling furnaces, one heating furnace, one 18-inch train of rolls and one 10-inch; product, bar iron.

Hibernia forge and rolling mill, Goodman & Phillips, Wagontown, Chester county. Very old works; 4 charcoal forge fires, one heating furnace, one hammer and one train of rolls; use wrought iron scrap; water power; product, boiler tube iron, skelp, flue and light boiler plate; annual capacity, 1,000 net tons.

Kensington iron and steel works, James Rowland & Co., 920 North Delaware avenue, Philadelphia. Built in 1845; 10 double puddling furnaces, one single puddling furnace, 8 heating furnaces, and 7 trains of rolls; product, merchant bar, band and skelp iron, and steel plow and shovel plate; annual capacity, 11,000 net tons; average yearly production, 10,000 tons.

Keystone iron works, Craig & Koch, Reading, Berks county. Built in 1857; product, boiler plate, tank, chute, stack, pipe, boat and car irons.

Laurel iron works, Hugh E. Steel, Coatesville, Chester county. Built in 1825; one annealing furnace, 4 heating furnaces and 3 trains of rolls; water and steam power; product, boiler, flue, boat, bridge, tank and tube iron; annual capacity, 4,800 net tons; average make, 3,600 tons.

Little Schuylkill rolling mill, James A. Inness, Port Clinton, Schuylkill county. Built in 1869; one double and 2 single puddling furnaces, one heating furnace, and one 16-inch train of rolls; water power; product, puddled, scrap and merchant bar.

Lukens roll mills, Huston & Penrose, Coatesville. Built in 1810; 3 double puddling furnaces, 4 heating furnaces, 2 trains of rolls and one hammer; steam and water power; product, all kinds of flues, boiler and ship plates, and bridge iron; annual capacity, 6,000 net tons; average yearly production, 4,000 tons. The puddle mill, operated by water power, occupies the site of the first plate mill built in the United States.

Wm. M'Ilvain & Son's boiler plate mill, Wm. M'Ilvain & Sons, Reading. Built in 1857; 4 single puddling furnaces, 3 heating furnaces, 2 trains of rolls and one 3-ton hammer; product, boiler plate, tank, chute, stack, pipe, bridge and boat iron; annual capacity, 4,500 net tons; average yearly production, 4,000 tons.

Mount Carbon rolling mill, James A. Inness, Mount Carbon, Schuylkill county. Four double puddling furnaces, 3 heating furnaces, one 18-inch train puddle rolls, one train muck bar rolls, and one 24-inch train plate rolls. Has been standing for several years.

Norristown iron works, James Hooven & Sons, Norristown, Montgomery county. Built in 1846; 6 double puddling furnaces, 3 heating furnaces, 3 trains of rolls and one hammer; product, skelp iron; annual capacity, 5,000 net tons; average yearly production, 4,800 tons.

Palo Alto rolling mill, Benjamin Haywood, Pottsville, Schuylkill county, Built in 1854; 12 double and 5 single puddling furnaces, 9 heating furnaces, one 8-inch, two 16-inch and two 18-inch trains of rolls; product light and heavy T and street rails, fish bars, chairs and merchant bar iron; annual capacity 15,000 net tons; average yearly product 10,000 tons.

Parkesburg iron works, Horace A. Beale, Parkesburg, Chester county. First started in April, 1873; 4 charcoal forge fires, 2 heating furnaces, one train of rolls and one hammer; product, blooms and tube skelp; annual capacity 2,500 net tons.

Pencoyd iron works, A. & P. Roberts & Co., 265 South Fourth street, Philadelphia. Works in Montgomery county, opposite Manayunk. Built in 1852; 7 double puddling furnaces, 3 heating furnaces and 2 trains of rolls; product, bar iron, bridge iron and rolled and hammered axles; the forge has 3 heating furnaces and 3 hammers; annual capacity 2,040 net tons bar and bridge iron, 3,382 tons rolled axles and 3,400 tons hammered axles.

Penn Treaty iron works, Marshall Brothers & Co., 24 Girard avenue, Philadelphia. Built in 1856; 6 single puddling furnaces, 6 heating furnaces and 4 trains of rolls; product, sheet and bar iron; annual capacity 4,000 tons.

Philadelphia iron and steel company, 939 North Delaware avenue, Philadelphia. Built in 1845; one single and 2 double puddling furnaces, one puddling machine, 6 heating furnaces and 4 trains of rolls; product, bar, angle and tee iron, fish plates and peculiar shapes; average annual capacity, single turn, 6,000 net tons.

Philadelphia rolling mill, S. Robbins & Son, Beach and Vienna streets, Philadelphia. Built in 1858; 9 double puddling furnaces, 5 heating furnaces and 4 trains of rolls; product, merchant bar iron of all kinds; annual capacity 14,000 net tons; average yearly production 9,000 tons.

Philadelphia and Reading rolling mill, Philadelphia and Reading railroad company, owners, W. E. C. Coxe, superintendent, Reading. Built in 1868; 12 single puddling furnaces, 10 heating furnaces and 3 trains of rolls, 23, 24 and 12-inch; product, iron and steel rails and splice bars; annual capacity 25,000 net tons; average yearly production 22,400 tons. This company is also constructing a plate mill and ship yard at Port Richmond, Philadelphia.

Phœnix iron works, Phœnix iron company, Phœnixville, Chester county. Office, 410 Walnut street, Philadelphia. Built in 1846; 20 double puddling and 8 single puddling furnaces, 23 heating furnaces and 8 trains of rolls; product, T rails, bar iron, beams, angles, tee iron and other shapes; annual capacity 24,000 net tons; average yearly production 20,000 tons. The company is building a new mill, of greater capacity than the old one, part of which will be put in operation in 1874.

Pine iron works, Joseph L. Baily & Co., Pine iron works, Berks county. Built in 1845; two heating furnaces and one train of rolls; water power; product, boiler plate; annual capacity, 2,600 net tons; average yearly production, 2,300 tons. This firm is building a mill for making muck bar at Glasgow, on Manatawny creek, one mile from Pottstown, and will run four double puddling furnaces and a muck train of rolls; water power; to be put in operation some time in 1874.

Potts Grove iron works, Potts Brothers, Pottstown, Montgomery county. Built in 1846 ; 2 double puddling furnaces, 3 heating furnaces, and 2 trains of rolls ; product, plate iron, comprising boiler, tank, pipe and flue iron ; annual capacity, single turn, 3,000 net tons ; average yearly production, 2,500 tons. This firm also has a bar mill, 3,000 tons yearly capacity, which has not been worked for 15 years.

Pottstown iron company, Pottstown, Montgomery county. Built in 1867 ; 14 double puddling furnaces, 5 heating furnaces, 4 trains of rolls, 53 nail machines, one hammer and one squeezer ; product, nails and plate iron ; annual capacity, nails, 6,000 net tons, plate, 5,000 tons.

Pottsville rolling mills, Atkins Brothers, Pottsville. Built in 1852 ; 14 double and 4 single puddling furnaces, 8 heating furnaces, and 3 trains of rolls ; product, T rails of both light and heavy sections, and street rails.

Reading bolt and nut works, J. H. Sternbergh, Reading. Built in 1866 ; enlarged in 1872 ; one single puddling furnace, 2 heating furnaces, one train of rolls, and one 1,500-pound steam hammer ; product, merchant bar iron, machine bolts, lag screws, rods for buildings, bridges, etc., and hot pressed nuts of all sizes ; annual capacity, about 3,000 net tons ; average yearly production, 2,500 tons.

Reading iron works, Seyfert, M'Manus & Co., Reading. Office, 631 Chestnut street, Philadelphia. Built in 1836 ; 12 single puddling furnaces, 4 heating furnaces, one rotary squeezer, 3 trains of rolls, 30 nail machines and 2 railroad spike machines ; product, bar, band, hoop and skelp iron ; annual capacity, 5,500 net tons ; average yearly product, 5,000 tons. Plate mill built in 1862 ; 7 double puddling furnaces, 4 heating furnaces, one steam hammer and 4 trains of rolls ; product, sheet, plate and bar iron ; annual capacity, 6,800 net tons ; average yearly product, 6,000 tons.

Stony Creek iron works, Schall & Co., Norristown, Montgomery county. Built in 1849 ; 5 double puddling furnaces, 3 heating furnaces, 3 trains of rolls and 29 nail machines ; product, bar, sheet, boiler plate and nails. No nails made in 1873.

Schuylkill iron works, Alan, Wood & Co., Conshohocken, Office, 519 Arch street, Philadelphia. Built in 1858 ; 16 double puddling furnaces, 12 heating and 4 grate furnaces, 7 trains of rolls, one hammer, and 2 rotary squeezers ; product, sheet and plate iron ; annual capacity, 15,000 net tons.

Schuylkill Haven rolling mill and Spike manufacturing company, Schuylkill Haven, Schuylkill county. Put in operation, November 1, 1873 ; 2 heating furnaces, one 10-inch train of rolls, and one railroad spike machine ; product, merchant bar iron, small T rails, and railroad spikes ; annual capacity, 2,500 net tons.

Stewart & Co., South Easton, Northampton county. Built in 1837; product, wire.

Tamaqua rolling mill, Tamaqua rolling mill company, Tamaqua, Schuylkill county, Built in 1865; 2 double and 3 single puddling furnaces, 2 heating furnaces, and 2 trains of rolls, product, merchant bar iron and mine T rails; annual capacity, 3,000 net tons; average yearly production, 2,500 tons.

Thorndale iron works, Wm. L. Bailey & Co., Thorndale iron works. Chester county. Built in 1847; one double puddling and two single puddling furnaces, 2 heating furnaces, 2 trains of rolls and one hammer; product, boiler plate iron; annual capacity, 3,000 net tons; average make, 2,250 tons.

Tioga rolling mill, Bulkely & Noblit, Germantown Junction, Philadelphia. Put in operation January 1, 1873; one heating furnace, one train of rolls, and 3 spike machines; product, bar iron and spikes; annual capacity, 2,500 net tons.

Valley iron works, C. E. Pennock & Co., Coatesville, Chester county. Built in 1837; product plate iron.

Viaduct iron works, Steele & Worth, Coatesville. Built in 1838; 3 single puddling furnaces, 8 heating furnaces, 4 trains of rolls and one hammer; product, all kinds of boiler, fire box, boat, tank, tube and flue iron, and patent straightened bridge plates; annual capacity, 11,000 net tons; average make, 8,000 tons.

Winch, Corydon, Canal street, Kensington, Philadelphia. One double and two single puddling furnaces, 2 heating furnaces, 4 trains of rolls, 12 spike machines, and 4 rivet machines; steam power; product, spike and rivet iron; average annual product, 3,000 net tons.

CENTRAL DISTRICT.

Altoona iron works, Altoona iron company, Altoona, Blair county. First put in operation in April, 1873,; one double and 6 single puddling furnaces, 3 heating furnaces, 3 trains of rolls, and one rotary squeezer; product, bar iron; annual capacity, 5,000 net tons.

Berwick rolling mill, Berwick rolling mill company, Berwick, Columbia county. Built in 1872; 5 single puddling furnaces, 2 heating furnaces, and 3 trains of rolls; product, bar iron; annual capacity, 3,600 net tons.

Central iron works, Harrisburg, Dauphin county. Built in 1853; 4 single puddling furnaces, 2 heating furnaces, one train of rolls, and one hammer; product, boiler plate and tank iron; annual capacity, 3,000 net tons; average annual production, 2,000 tons.

Chesapeake nail works, Chas. L. Bailey & Bro., Harrisburg, Dauphin county. Built in 1867; 14 single puddling furnaces, 3 heating furnaces, 2 trains of rolls, and 66 nail machines; product, nails; annual capacity, 7,500 net tons; average annual production, 6,700 tons.

Chiques rolling mill, Becker & Reinhold, Chiques, Lancaster county. Built in 1865; one single and 2 double puddling furnaces, one heating furnace, and 2 trains of rolls; product, bar iron; annual capacity, 3,000 net tons; average yearly production, 1,500 tons.

Codorus steel works, York County iron and steel company, York, York county; Built in 1869; 10 single puddling furnaces, 2 heating furnaces, 2 trains of rolls, and one hammer; product, principally puddled steel for heading iron rails; annual capacity, 7,500 net tons.

Columbia steel and iron works, Maitland, Audenreid & Co., Columbia. Office, N. E. corner Third and Dock streets, Philadelphia. Built in 1854; product, rails, bars, and rods.

Co-operative iron and steel works, Danville, Montour county. Built in 1871; 8 single puddling furnaces, one 18-inch puddle train, and one squeezer; product, puddled iron, or muck bar; annual capacity, 5,500 net tons. Now building a rail mill, 100 feet by 194 feet, to contain 4 heating furnaces, and one 18-inch rail train; immediate capacity to be 10,000 tons, but the machinery will be fitted for 25,000 tons, needing only additional heating furnaces; to be completed in 1874.

Crescent iron and nail works, Heilman & Co., Cogan Station, Lycoming county. Built in 1842; 2 single puddling furnaces, one heating furnace, one train of rolls, and 7 nail machines; water power; product, bar iron and nails.

Danville iron works, William Faux, proprietor, Danville. Built in 1870; 4 heating furnaces, and one train of 16-inch rolls; product, T rails from 16 to 56 lbs. per yard, inclusive; annual capacity, 9,000 net tons.

Duncannon iron company, Duncannon, Perry county. Office, 122 Race street, Philadelphia. Built in 1838; 11 single puddling furnaces, 5 heating furnaces, 4 trains of rolls, and 52 nail machines; steam and water power; product, bar iron and nails.

Eagle iron works, C. Curtin & Co., Roland, Centre county. Built in 1810; one single puddling furnace, one puddling machine, one heating furnace, 6 forge fires, 2 trains of rolls and one hammer; water power; product, bar iron and charcoal blooms and slabs; annual capacity, 2,000 net tons; average annual production 1,200 tons.

Hancock steel and iron company, Danville, Montour county. Built in 1847; product, rails. Formerly National iron company.

Harrisburg nail works, Harrisburg. Works at West Fairview, Cumberland county. Built in 1810; 9 double puddling furnaces, 6 heating furnaces, 2 trains of rolls and 73 nail machines; steam and water power; product, nails and muck bars; annual capacity, 7,500 net tons of nails and

2,000 tons of muck bars; average yearly production, 6,300 tons of nails and 1,500 tons of muck bars.

Hollidaysburg iron works, Hollidaysburg iron and nail company, Hollidaysburg, Blair county, Built in 1860; 8 single puddling furnaces, 3 heating furnaces, three trains of rolls and 18 nail machines; product, bars, light T rails and nails; annual capacity, 3,500 net tons; average annual production, 2,000 tons.

Howard iron works, Lauth, Thomas & Co., Howard, Centre county. Built in 1840; 6 single puddling furnaces, 2 heating furnaces and one 16-inch train of rolls, one 12-inch and one 8-inch train of bar and guide rolls and one rotary squeezer; water power; product, all sizes merchant bar, band, hoop and guide iron; annual capacity, 3,600 net tons finished iron. The establishment includes a large warehouse, in which a stock of 300 tons of all kinds of bar iron is constantly kept on hand.

Juniata rolling mill, Hollidaysburg iron and nail company, lessees, Hollidaysburg. Built in 1866; 9 single puddling furnaces, 3 heating furnaces, 2 trains of rolls, 30 nail machines and one hammer; product, sheets and nails; annual capacity, 3,500 net tons; average annual production, 2,000 tons.

Lackawanna iron works, Lackawanna iron and coal company, Scranton, Luzerne county. Built in 1847; 85 single puddling furnaces, 19 heating furnaces and 7 trains of rolls; steam and water power; product, railroad iron and various sizes of merchant iron; annual capacity, 58,500 net tons rails, and 2,500 tons merchant iron; average monthly production, 4,480 tons rails. The company is building a new mill of same capacity as the old one, to be completed in 1874, and has begun to build Bessemer steel works.

Lancaster manufacturing company, Lancaster. Put in operation in April, 1873; 8 single puddling furnaces, 3 heating furnaces, one 18-inch puddle train, one 16-inch bar train and one 8-inch guide train of rolls and 2 hammers; product, bar, iron splice bar, axles, bolts, spikes and forgings; annual capacity, 3,600 net tons.

Lancaster rolling Mill, Manuel, M'Shain & Co., Hempfield, Lancaster county. Office, 140 Walnut street, Philadelphia. Bought by present parties and enlarged in June, 1872; one double and 5 single puddling furnaces, 2 heating furnaces, 2 trains of rolls and one hammer; product, merchant bar and guide iron; annual capacity 3,000 net tons.

Lebanon rolling mill, Light & Brothers, Lebanon Built in 1867; 4 double puddling furnaces, 6 heating furnaces, 5 trains of rolls and one hammer; product, plate, sheet and flue iron and muck bar; annual capacity 4,500 net tons; average make 3,000 tons.

Lochiel rolling mill company, Harrisburg. Built in 1865; merchant mill completed in November, 1871; 8 double and 4 single puddling furnaces, 8 heating furnaces for rails, 4 heating furnaces for the merchant mill and 4 trains of rolls, three 18 and one 16-inch; product, rails from 15 lbs. per yard upward, bar iron and splice bars; annual capacity 25,000 net tons rails, and 3,000 tons merchant iron and splice bars.

Logan works, Logan iron and steel company, Lewistown, Mifflin county. Office, 218 South Fourth street, Philadelphia. Built in 1869; forge very old; 3 single puddling furnaces, 3 heating furnaces, one train of rolls, one steam hammer and 3 water hammers; steam and water power; product, hammered and rolled bar and blooms. The company has a plate mill not now in use, containing one 30-inch train of rolls, 3 heating furnaces, &c. Another part of the establishment, comprising a large steam hammer and a tire mill, is rented to the Crucible steel works.

Milesburg iron works, M'Coy & Linn, Milesburg, Centre county. Built in 1830; 3 single puddling furnaces, 2 heating furnaces, 3 trains of rolls and 2 hammers; steam and water power; product, all sizes bar iron, spring and soft rods and spring and soft wire of all numbers; annual capacity 3,000 net tons; average yearly production 1,576 tons.

Milton rolling mill, Milton iron company, Milton, Northumberland county. Put in operation December 1, 1872; 6 puddling furnaces, one heating furnace and 3 trains of rolls; product, round, square and flat bar iron; annual capacity 2,000 net tons; average yearly production 1,500 tons.

Northumberland iron works, Van Alen & Co., Northumberland, Northumberland county. Built in 1867; 7 single puddling furnaces, one heating furnace, one train of rolls and 21 nail machines; product, nails, nail plate, muck and scrap bars; annual capacity 4,800 net tons muck bar, 4,000 tons nail plate, 2,250 tons nails.

Paxton rolling mills, M'Cormick's estate, Harrisburg. Built in 1869; 5 double puddling furnaces, 5 heating furnaces, 3 trains of rolls and one hammer; product, boiler, skelp and tank iron; annual capacity 8,750 net tons.

Pennsylvania iron works, Waterman & Beaver, Danville. Office, 407 Library street, Philadelphia. Built in 1845; 22 double and sixteen single puddling furnaces, 15 heating furnaces, 4 trains of rolls and one hammer; product, railroad iron; annual capacity, 40,320 net tons; average yearly production, 27,242 tons.

Pennsylvania steel works, Pennsylvania steel company, Steel Works P. O., Baldwin Station, Dauphin county. Office, 216 South Fourth street, Philadelphia. Bessemer steel works built in 1866–7; two 5-ton converters, with cupolas and hydraulic machinery; capacity, 120 tons steel every 24 hours. Rolling mill built in 1867–8, and enlarged since; daily capacity, single turn, 100 tons steel rails. Hammer mill contains 6 and 12-ton hammers, the larger turning out 75 to 80 tons of blooms and forgings every 24 hours. Two Siemens's furnaces, capacity 25 to 30 tons daily. Heating furnaces sufficient for the entire make. Product, steel ingots, forgings, rails of light and heavy sections, street rails, and railroad axles, crossings, frogs and switches. Capacity, 36,000 gross tons per annum.

Portage nail works, John Musselman, Duncansville, Blair county. Again started in March, 1874. Built in 1839; 6 single puddling furnaces, 2 heating furnaces, 3 trains of rolls and 8 nail machines; product, bar iron and nails.

Susquehanna iron works, Susquehanna iron company, Columbia. Three heating and 12 single puddling furnaces; product, bar iron.

Valentine & Co., Bellefonte, Centre county. Built in 1825; product, bars and rods.

Valentine iron company, Williamsport, Lycoming county. Built in 1873–4; 4 single puddling furnaces, 2 heating furnaces, 8 forge fires, one hammer and 3 trains of rolls; one 8 and two 15-inch trains; product, charcoal blooms, bars and wire rods; annual capacity, 4,000 tons

Van de Sand & Cap, Lebanon.

ABANDONED OR STANDING.

Colemanville rolling mill, Colemanville, Lancaster county. Old merchant mill; not in operation for several years, but will again be used upon the completion of the Columbia and Port Deposit railroad.

Juniata iron works, S. & B. R. Hatfield, Alexandria; Huntingdon county. Built in 1838; product, sheet, plate and bar iron; burned in 1868 and not rebuilt. The firm has a forge at the same place in operation.

Safe Harbor rolling mill, Reeves, Abbott & Co., Safe Harbor, Lancaster county. Built in 1848; 16 double and 2 single puddling furnaces, 8 heating furnaces, and 2 trains of rolls; product, railroad iron; has made 12,000 net tons of rails a year; has not made any rails since 1861, and the mill has not been in operation since 1865; upon the completion of a railroad, now in course of construction, this mill will in all probability again be used.

WESTERN DISTRICT.

American iron works, Jones & Laughlins, Pittsburg, Allegheny county. Built in 1852; 75 single puddling furnaces, 30 heating furnaces, 18 trains of rolls and 73 nail machines; product, bars, nails, hoops, railroad spikes, plates, sheets, cold-rolled shafting, and 8 to 40-lb. T rails; annual capacity, 50,000 net tons.

Anchor nail and tack works, Chess, Smyth & Co., Pittsburg. Built in 1837; 20 single puddling furnaces, 5 heating furnaces, 4 trains of rolls, 90 nail machines, 50 tack machines, and one hammer; product, nails, tacks and brads; annual capacity, 6,000 net tons.

Atlantic iron and nail works, Kimberly, Carnes & Co., Sharon, Mercer county. Twenty-three boiling and 6 heating furnaces, and 40 nail machines; product, bar, plate, hoop, rod iron and nails; annual capacity, 8,000 net tons.

Birmingham iron works, M'Knight, Duncan & Co., Pittsburg. Built in 1836; 20 single puddling furnaces, 5 heating furnaces, and 5 trains of rolls; product, merchant bar iron, rounds, squares, ovals, half ovals, bands, hoops, etc.; annual capacity, 10,000 net tons; average yearly production, 9,000 tons.

Brady's Bend iron company, Brady's Bend, Armstrong county. Office, 54 Cliff street, New York. Built in 1842; under present management from 1862; 28 single puddling furnaces; 12 heating furnaces, and 3 trains of rolls; product, railroad iron; annual capacity, 20,000 net tons; average yearly production, 11,000 tons.

Byers, M'Cullough & Co., Pittsburg. Built in 1862–3; 25 puddling furnaces, 5 heating furnaces, 3 trains of rolls, and a pipe mill; product, bars, plates, sheets and tubing.

Cambria iron works, Cambria iron company, Johnstown, Cambria county. Office, 218 South Fourth street, Philadelphia. Built in 1853; 42 double puddling furnaces, 28 heating furnaces, one hammer, and the following trains of rolls; 21-inch rail mill, 5 sets; 18-inch rail mill, 2 sets; 12-inch rail mill, 3 sets; 16-inch merchant mill, 3 sets; 22-inch puddle mill, 6 sets; 21-inch puddle mill, 6 sets, and 30-inch blooming mill, one set, Total, 26 sets. Bessemer steel works has two 5-ton converters, and all the appliances for making steel rails. Product, iron and steel rails; capacity per annum, 100,000 gross tons, average yearly make, 80,000 to 90,000 gross tons.

Clinton and Millvale rolling mills, Graff, Bennett & Co., Pittsburg. Built about 1841; 41 single puddling furnaces, 6 Danks's puddling machines, 17 heating furnaces, 11 trains of rolls, 41 nail machines and one hammer; product, bar, sheet, plate and nails; annual capacity, 20,000 net tons; average make, 20,000 tons.

Eagle rolling mill, Mullen & Maloney, Pittsburg. Built in 1850; product, bar and sheet iron. Formerly James Wood's Sons & Co.

Erie rolling mill, Erie rolling mill company, Erie, Erie county. Put in operation November 1, 1873; 11 single puddling furnaces, 4 heating furnaces and 3 trains of rolls, one 8, one 10 and one 15-inch; product, bar iron; annual capacity, 6,000 net tons.

Etna rolling mill, Spang, Chalfant & Co., Pittsburg. Built in 1828; new mill added in 1873–4; 3 trains of 3 high rolls, 7 Siemen's double puddling (gas) furnaces and 2 Siemen's heating (gas) furnaces; product, sheets, plates, rods and tubing.

Fort Pitt iron and steel works, Reese, Graff & Woods, Pittsburg. Organized in 1842; 25 boiling furnaces, 14 heating furnaces, one 20-inch muck mill, one 16-inch bar mill, 3 8-inch guide mills, one 9-inch and one 12-inch steel mill; one 20-inch plate and sheet mill, 2 converting furnaces, 7 steam hammers, one squeezer, 4 shingle strip machines, one horse-shoe factory, 1 spring factory, 12 coke steel-melting holes, and 2 Siemens's 24-pot steel-melting furnaces; product, plates, sheets, guides, bars, and German and cast steel; annual capacity, 12,000 net tons merchant iron, 2,000 tons German steel, and 4,000 tons cast steel.

Glendon rolling mill, Dilworth, Porter & Co, Pittsburg. Built in 1857; 24 single puddling furnaces, 4 heating furnaces, 9 railroad spike machines and 5 trains of rolls, two 8, one 10, and two 16-inch trains; product, railroad and marine spikes, railroad chairs, and fish bars and bolts; annual capacity, 10,500 net tons; average make, 8,000 tons.

Greenville rolling mill, Greenville, Mercer county. Built in 1871; two heating furnaces, 2 double and 5 single puddling furnaces, and 3 trains of rolls; one 16-inch bar, one 16-inch muck and one 8-inch hoop; product, bar and hoop iron, principally hoop; annual capacity, 5,000 net tons.

Iron City and Siberian iron works, Rogers & Burchfield, Pittsburg. Iron City mill at Apollo, Armstrong county; built in 1850; 9 single puddling furnaces, 5 heating furnaces and 6 trains of rolls. Siberian mill at Leechburg, Armstrong county; built in 1872; 6 single puddling furnaces, 6 heating furnaces, 6 trains of rolls, 2 steam hammers, one refinery and 2 knobbling fires; this mill is run with gas for fuel from a well 1,200 feet deep, furnishing all the fuel required for puddling, heating and making steam, not one bushel of coal having been used there for the past six months. Product, sheet iron and charcoal terne plates; annual capacity, 6,000 net tons; average make, 5,500 tons.

Juniata iron works, Shoenberger & Co., Pittsburg, Pa. Built in 1824; 29 single puddling furnaces, 11 heating furnaces, 7 trains of rolls, and 92 nail machines; product, nails, sheet and plate iron, horse and mule shoes, and horse-shoe bar; annual capacity, 15,000 net tons.

Kensington rolling mill, H. Lloyd, Son & Co., Pittsburg. Built in 1828; 16 single puddling furnaces, 6 heating furnaces, and 4 trains of rolls; product, bar, sheet and plate iron, flat rails, and T rails from 12 to 30 lbs. to the yard; annual capacity, 6,000 net tons; average yearly production, 5,000 tons.

Keystone iron works, Glass, Neely & Co., Pittsburg. Built in 1865; 19 single puddling furnaces, one scrap and 5 heating furnaces, and 4 trains of rolls; product, all sizes round, square, and flat bar iron, hoop, plate, and sheet iron; annual capacity, 11,000 net tons.

M'Keesport iron works, Wm. D. Wood & Co., M'Keesport, Allegheny county. Built in 1851; 10 forge fires, 7 single puddling furnaces, 16 heating furnaces, 4 trains of rolls, and 2 hammers; product, sheet iron, both common American and planished in imitation of Russian; annual capacity, 4,000 net tons; average make, 3,500 tons.

Middlesex rolling mill company, Middlesex, Mercer county. Put in operation June 1, 1873; 10 single puddling furnaces, one heating furnace, and 2 trains of rolls: one 10 and one 18 inch; product, merchant bar iron; annual capacity, 5,000 net tons.

Monongahela and Allegheny iron works, Lewis, Oliver & Phillips, Pittsburg. Built in 1866 and 1864, respectively; 49 single puddling furnaces, 8 heating furnaces, and 8 trains of rolls; product, bar, round, square and oval bands, and peculiar and odd shapes; annual capacity, 20,000 net tons.

Newcastle iron company, Newcastle, Lawrence county. Built in 1873; 10 single puddling furnaces, 5 heating furnaces, 3 trains of rolls, and one hammer; product, sheet and plate iron; annual capacity, 6,000 net tons; average annual make, 4,500 tons.

Old Fort iron works, Jacobs & Jackson, Brownsville, Fayette county, Completed December 1, 1873; 6 single puddling furnaces, 3 heating furnaces, 2 trains of rolls, 2 spike and bolt machines, 2 hammers, and one squeezer; product, bar iron, car axles, and general forging, 20 lb. T rails, spikes and bolts; yearly capacity, 9,000 net tons.

Onondago iron and coal company, Newcastle, Lawrence county. Product, bars, rods, and nails.

Ormsby iron works, Wharton, Brothers & Co., Pittsburg. 20 puddling furnaces, 5 heating furnaces, and 4 trains of rolls; product, bar, rod, guide, and hoop iron.

Pennsylvania iron works, Everson, Macrum & Co., Pittsburg. Pittsburg mill built in 1844; branch mill at Scottdale, Westmoreland county, built in 1873; 30 puddling furnaces, 10 heating furnaces, and 7 trains of rolls; product, bars, rods, sheets and plates; the latter mill makes fine sheet iron and muck bar.

Pittsburg bolt works, Pittsburg bolt company, Pittsburg.

Pittsburg forge and iron company, Pittsburg. Built in 1864; 15 single puddling furnaces, 7 heating furnaces, 3 trains of rolls, and 3 hammers; product, (1) bar, rod, band, hoop, oval and half oval iron, fish plates, and track bolts, and (2) hammered car and locomotive axles, railroad, steamboat and machine forgings; capacity, yearly, (1) 13,000 net tons, (2) 2,000 tons; average yearly production, (1) 8,500 tons, (2) 1,500 tons.

Pittsburg iron works, Jacob Painter & Sons, Pittsburg. Built in 1833; 50 single puddling furnaces, 14 heating furnaces, five 8-inch trains of rolls, two 10-inch, one 12-inch, one 16-inch, and two 20-inch muck rolls; product, principally oil, whisky and trunk hoops; also hoops for pails, tubs and wooden ware, lock iron, saws, bands and hinge iron; annual capacity, 19,000 net tons; average yearly production, 17,000 tons.

Sable iron and nail works, Zug & Co., Pittsburg. Built in 1845; 34 single puddling furnaces, 11 heating furnaces, 6 trains of rolls and 55 nail machines; product, merchant bar iron, including heavy sizes flat bars and squares made by the universal rolls, and nails; annual capacity, 15,000 net tons.

Sharon rolling mills, Westerman iron company, Sharon, Mercer county. Built in 1862; 29 single puddling furnaces, 12 heating furnaces, 7 trains of rolls, and 46 nail machines; product, bar, hoop and sheet iron, railroad and boat spikes, light T rails and nails; annual capacity, 15,000 net tons.

Shenango iron works, Reis, Brown & Berger, Newcastle, Lawrence county. Built in 1863; 27 single puddling furnaces, 9 heating furnaces, 5 trains of rolls and 55 nail machines; product, bar, sheet, band, wrought spikes and nails; annual capacity, 15,000 net tons; average yearly make, 12,000 tons.

Sligo iron works, Phillips, Nimick & Co., Pittsburg. Built in 1825; product, bar, plate and sheet iron.

Soho iron mills, Moorhead & Co., Pittsburg; 5 trains of rolls; product, sheets, plates and galvanized iron.

Solar iron works, Wm. Clark & Co., Pittsburg; 16 puddling furnaces, 5 heating furnaces and 5 trains of rolls; product, hoop and band iron.

Star iron works, Lindsay & M'Cutcheon, Pittsburg. Built in 1862; 14 puddling furnaces, 4 heating furnaces and 4 trains of rolls; product, hoop iron of all sizes; annual capacity, 8,000 net tons.

Stewart iron works, Stewart iron company, Sharon, Mercer county. Built in 1870; 16 single puddling furnaces, one hammer, and 2 trains of rolls, each 16-inch; product, muck bar and blooms.

Superior rolling mill, Harbaugh, Mathias & Owens, Pittsburg. Built in 1865; product, rails.

Thompson, J. Edgar, steel works, Carnegie, M'Candless & Co., Braddock's Station, Allegheny county. Office at Pittsburg. Building in 1874; to embrace two 5-ton converters, and appliances for rolling Bessemer steel rails; to be completed early in 1875.

Union forge and iron mills, Wilson, Walker & Co., Pittsburg.

Union iron mills, Carnegie, Kloman & Co., Pittsburg. Built in 1862; 21 single puddling furnaces, 10 heating furnaces, 7 trains of rolls and one hammer; product, beams, channels, tees, angles, plates and bar iron; annual capacity, 27,000 net tons.

United States iron and tin plate works, U. S. iron and tin plate company, M'Keesport, Allegheny county. Office at Pittsburg. Built in 1873–4; 4 double puddling and 4 heating furnaces, 3 trains of rolls and one hammer; product, tin plate and all kinds of sheet iron; annual capacity, 8,000 net tons.

Valley rolling mill, Calwell, Mosgrove & Co., Kittanning, Armstrong county. Built in 1848; 16 single puddling furnaces, 5 heating furnaces, 3 trains of rolls, 22 nail machines and one squeezer; product, rod and sheet iron, nails and spikes; annual capacity, 7,000 net tons; idle since March, 1873.

Vesuvius iron works, Lewis, Bailey, Dalzell & Co., Pittsburg. Built in 1846; 24 single puddling furnaces, 10 heating furnaces, 6 trains of rolls, and 50 nail machines; product, bar and sheet iron, rods, hoops and nails; annual capacity, 12,000 net tons.

Wayne iron and steel works, John H. Brown & Co., Pittsburg. Built in 1829; product, bar iron, rod, hoop, sheet, tank, light T rails, splice bars, boiler plate, rivets and cast steel.

Wood's Sons (James) & Co., Pittsburg. Built in 1850; product, bar and sheet iron. Recently sold to Malone, Mullen & Co.

STANDING.

Wheatland rolling mills, trustees J. T. & C. A. Wood, Wheatland, Mercer county. Built in 1872; 12 double puddling furnaces, 14 heating furnaces and 3 trains of rolls; steam power; product, railroad, bar and sheet iron; annual capacity, 45,000 net tons; average yearly production, 30,000 tons.

PROJECTED.

Connellsville, Fayette county. Rolling mill and nail factory.

Dunbar, Fayette county.

BESSEMER STEEL RAIL MILLS.

A COMPLETE LIST OF ROLLING MILLS IN THE UNITED STATES WHICH MANUFACTURE BESSEMER STEEL RAILS.

Rensselaer iron works, John A. Griswold & Co., Troy, New York. Two five-ton converters and one one-and-a-half ton converter.

Cambria iron works, Cambria iron company, Johnstown, Pa. Two five-ton converters.

Pennsylvania steel works, Pennsylvania steel company, Baldwin Station, near Harrisburg, Pa. Two five-ton converters and a new plant, with four five-ton converters, in course of erection.

Newburgh rolling mill, Cleveland rolling mill company, Newburgh, Ohio. Four five-ton converters.

North Chicago rolling mill, North Chicago rolling mill company, Chicago, Illinois. Two five-ton converters.

Union rolling mill, Union rolling mill company, Chicago, Illinois. Two five-ton converters.

Joliet iron and steel works, Joliet iron and steel company, Joliet, Illinois. Two five-ton converters. These works made their first blow January 26, 1873, and their first steel rail March 15, 1873.

Bethlehem rolling mill, Bethlehem iron company, Bethlehem Pa. Two five-ton converters. These works made their first blow on Saturday, October 4, 1873, and their first steel rail on Saturday, October 11, 1873.

J. Edgar Thompson steel works, Carnegie, M'Candless & Co., Pittsburg, Pa. Works at Braddock's Field are now being built, and will contain two five-ton converters. They are expected to be entirely finished early in 1875.

Lackawanna iron works, Lackawanna iron and coal company, Scranton, Pa. Now building steel works to contain two five-ton converters. The foundations were laid June 16, 1874, and the walls are expected to be ready for the roof by December 1, 1874.

STEEL WORKS OF PENNSYLVANIA.

Black Diamond steel works, Park, Brother & Co., Pittsburg. Established in May, 1862 ; 6 carbonizing furnaces, 72 melting furnaces and 6 trains of rolls ; product, edge-tool steel, homogeneous boiler-plate steel, spring steel, agricultural implement steel, and cast and German plow steel ; annual capacity, 12,000 net tons.

Blair iron and steel company, Pittsburg. Works at Glenwood, on the Monongahela river. Homogeneous iron and steel made from the ore by Thomas S. Blair's direct process.

Codorus steel works, York County iron and steel company, York, York county. *See Rolling Mills.*

Crescent steel works, Miller, Barr & Parkin, Pittsburg. Built in 1867 ; 4 heating furnaces, 2 trains of rolls, one 12 and one 9-inch, 3 steel cementing furnaces, 24 steel melting holes, and four 24-pot Siemens's melting furnaces and 6 hammers ; product, hammered and rolled bar steel and cast, spring and edge-tool steel ; annual capacity, 4,000 net tons ; average make, 3,000 tons.

Crucible steel works, Logan, near Lewistown, Mifflin county. Office, 218 South Fourth street, Philadelphia. Twenty-eight 4-pot melting holes, 5 heating furnaces and one tire mill ; product, locomotive cast steel tire, frogs, crossings, forgings, steel castings, etc.

Fairmount steel works, Alexander Foster & Co., Twenty-fourth street and Pennsylvania avenue, Philadelphia. Built in 1866 ; 3 heating furnaces, six 4-pot melting furnaces and 3 steam hammers ; product, machinery steel, frog plates and points, cast spring steel, and all kinds of steel forgings ; annual capacity, 750 net tons ; average make, 500 tons.

Fort Pitt iron and steel works, Reese, Graff & Woods, Pittsburg. *See Rolling Mills.*

Hussey cast steel works, Pittsburg.

Hussey, Wells & Co., Pittsburg. Built in 1859 ; 7 24-pot melting furnaces and 9 hammers ; product, fine tool steel, spring steel, boiler steel and agricultural steel ; annual capacity, 13,000 net tons.

Kensington iron and steel works, James Rowland & Co., 920 North Delaware avenue, Philadelphia. *See Rolling Mills.*

Keystone saw, tool, steel and file works, Henry Disston & Sons, Front and Laurel streets, Philadelphia—Branch works at Tacony, Philadelphia. Founded in 1840, and commenced the manufacture of steel in 1854 ; now running 42 melting furnaces, 2 trains of rolls, 6 heating furnaces and one hammer ; product, principally saw steel of every description, also, tool steel, homogeneous steel, steel for engravers' plates, etc.; annual capacity, 2,500 net tons.

La Belle steel works, Reiter, Sutton & Co., Pittsburg. Built in 1863 ; 4 25-ton converting furnaces, 4 open-hearth refining furnaces, 4 puddling furnaces, 7 heating furnaces, 12 cast steel melting furnaces, 5 hammers and 3 trains of rolls, one 20-inch train, one 16-inch and one 10-inch ; product, cast and German plow steel, agricultural steel of every description, cast and German spring steel, cast machinery steel, and cast and German steel tire ; annual capacity, 1,000 net tons cast steel, 2,600 net tons of German plow and spring steel, and 2,400 net tons of steel of other descriptions. Total, 6,000 net tons.

M'Haffie steel works, M'Haffie Direct Steel casting company, Lamokin, Delaware county. Office at Evelina and Levant streets, Philadelphia. Make castings from pig iron which they afterwards convert into steel by a secret process.

Midvale steel works, Nicetown, Philadelphia. Built in 1868 ; 10 heating furnaces, one 23-inch train rolls, 3 hammers, one cementing furnace, and 50 steel-melting holes ; product tool, steel, crow bars, &c. ; locomotive tire mill not now in use. These works were formerly known as the William Butcher steel works, Moore, Davis, DeHaven & Co., Pittsburg. Nellis, A. J., Pittsburg.

Oxford iron and steel works, William & Harvey Rowland, Frankford, Philadelphia. Built in 1842, and very much enlarged recently, especially in 1873; 3 heating furnaces, 3 trains of rolls, one hammer; 4 converting furnaces, using wood exclusively, and 24 2-pot crucible steel melting furnaces convert iron into steel, re-roll Norway iron, slit Norway nail rods, and make elliptic springs, sheet cast steel, cast spring steel, machinery and plow steel, and tire and sleigh steel; annual capacity, 4,500 net tons; average make, 2,500 tons.

Philadelphia steel works, William Baldwin, Frankford, Philadelphia. Built in 1865; 4 heating furnaces, 6 steam drop hammers and one tilt hammer, one cementing furnace, not now in use, and 32 steel-melting holes; product, cast and shear steel, frog steel, railroad and locomotive forgings, sledges, hammers, tools, etc.; annual capacity, 1,200 tons.

Pittsburg steel casting company, Pittsburg. Built in 1871; 19 steel-melting holes and one Siemen's (gas) furnace of 6 tons daily capacity; product, steel castings.

Pittsburg steel works, Anderson & Woods, Pittsburg. Built in 1845; product, cast and German plow steel, plate, and best edge tool steel; annual capacity 7,000 net tons.

Sheffield steel works, Singer, Nimick & Co., Pittsburg. Built in 1848; in mill, 6 puddling and 6 knobbling furnaces, one 18-inch train of rolls, and one 4½-ton steam hammer; four 24-pot Siemens's gas furnaces, 80 melting furnaces, and one 5-ton open hearth-furnace; annual capacity 12,000 net tons of cast steel; in steel converting department, 8 furnaces, annual capacity, 5,500 net tons; in finishing mill, one 22-inch, 3 high sheet and plate train, one 16-inch and one 10-inch bar train, 11 heating furnaces, and 10 hammers; the new plate mill has 4 sets of 28-inch rolls, 4 sets of 20-inch rolls, and 6 heating furnaces; product, steel plates, tool steel, saw steel, and all other kinds of steel.

Wayne iron and steel works, Brown & Co., Pittsburg. *See Rolling Mills.*

PROJECTED.

Isaac Jones, Sons & Co., M'Keesport, Allegheny county.

BLOOMARIES OF PENNSYLVANIA.

Barre forge, Dorris & Co., Barre forge, Huntingdon county. Four forge fires ; product, charcoal blooms ; annual capacity, 900 net tons.

Carlisle iron works, C. W. & D. V. Ahl, Boiling Springs, Cumberland county. Built in 1791 ; 5 forge fires and one hammer ; water power ; product, charcoal blooms ; annual capacity, 2,400 net tons ; average make, 2,200 tons.

Castle Fin forge, J. M. Bowman, Castle Fin, York county. Four fires and 1 run-out ; 2 hammers ; water power ; product, charcoal blooms ; annual capacity, 1,000 net tons ; average yearly make, 750 tons.

Charming forge, W. & B. F. Taylor, Womelsdorf, Berks county. Works very old ; 5 fires, one heating furnace, one refinery, and 2 hammers ; steam power ; product, blooms and hammered bar iron ; annual capacity, 1,000 net tons ; average make, 700 tons.

Cold Spring forge, S. H. Hicks & Brothers, Tyrone, Blair county. Product, blooms.

Colemanville forge, Edmund Smith, Colemanville, Lancaster county. Built in 1828 ; water power ; annual capacity, 500 net tons blooms.

Cove forge, John Royer, Springfield furnace, Blair county. Two forge fires and one run-out ; product, charcoal blooms ; annual capacity, 450 net tons

Cove forge, Wm. M'Ilvain & Sons, Duncannon, Perry county. Built in 1864 ; 5 fires, one refinery, and one hammer ; blast operated by water power, and hammer by steam ; product, charcoal blooms ; annual capacity, 1,200 net tons ; average yearly make, 900 tons.

Ellendale forge, Spang & Wanner, Ellendale forge, Dauphin county. Rebuilt in 1872 ; 5 fires, one run-out for coke, and one hammer ; water power ; product, anthracite and charcoal blooms ; annual capacity, 1,200 net tons ; average make, 950 tons.

Ellwood forge, J. B. Seidel & Sons, Ellwood, Schuylkill county. Built in 1863 by Dr. Geo. N Eckert, and bought in April, 1874, by present owners ; 4 fires and one run-out fire ; product, charcoal blooms ; annual capacity, 1,250 net tons.

Etna forge, Geo. D. Isett & Bro., Yellow Springs, Blair county. Four forge fires ; product, charcoal blooms.

Franklin and Sarah forges, assignees of Essington Hammond, Sarah, Blair county. Four forge fires ; product, charcoal blooms ; annual capacity, 900 net tons.

Exeter forge, Gottlieb Moyer, Reading, Berks county. Product, blooms.

Juniata forge, J. R. Hunter & Co., Petersburg, Huntingdon county.

Four forge fires and one hammer; water power; product, charcoal blooms; annual capacity, 800 net tons.

Juniata iron works, S. & B. R. Hatfield, Alexandria, Huntingdon county. Built in 1847; 4 fires and one 4-tuyere run-out, and a puddling forge, with 3 single puddling furnaces; water power; product, charcoal blooms, made into boiler plate at Brandywine rolling mills, Coatesville, Pa.; annual capacity, 950 net tons; average annual make, 850 tons.

Liberty forge, Mumma & Boyer, Lisburn, Cumberland county. Product, blooms.

Logan works, Logan iron and steel company, Lewistown, Mifflin county. Office, 218 South Fourth street, Philadelphia. Forge built about 1810; 4 charcoal fires, one run-out for coke, and 2 hammers; steam and water power; product, charcoal blooms.

Mainville forge, C. E. Pennock & Co., Mainville, Columbia county. Built in 1824; one hammer, 3 forge fires, and one run-out; water power; product, charcoal blooms; annual capacity, 800 net tons.

Martic forge, Potts & Davis, Colemanville, Lancaster county. Four fires; water power; product, charcoal blooms; annual capacity, 1,000 net tons; average annual make, 600 tons.

Mary Ann forge, B. F. Morret, Downington, Chester county. Built in 1806; 3 fires and one hammer; water power; product, blooms; annual capacity, 720 net tons.

Milesburg iron works, M'Coy & Linn, Milesburg, Centre county. Built in 1800; product, blooms.

Monroe forge, Spang & Wanner, Union forge, Lebanon county. Four fires and one run-out; water power; product, anthracite and charcoal blooms; annual capacity, 850 net tons; average make, 650 tons.

Mont Alto forge, Mont Alto iron company, G. W. Wiestling, superintendent, Mont Alto, Franklin county. Product, blooms.

Mount Airy forge, Thomas E. Williams, Shartlesville, Berks county. Built about 1840; water power; product, blooms.

New Market forge, Light Brothers, Palmyra, Lebanon county. Product, blooms.

North Kiln forge, near by, has been idle for five years.

Perry forge, J. B. Seidel & Sons, Marysville, Perry county. Built in 1862; 5 fires and one run-out fire; water power; product, charcoal blooms; annual capacity, 1,500 net tons; average make, 1,150 tons.

Ringwood forge, Thomas J. Bailey, Penningtonville, Chester county. Very old works; 3 forge fires and one run-out; water power; product, charcoal blooms.

Sadsbury forge, Charles Goodman & Brother, Penningtonville, Chester county. Works very old ; 3 forge fires and one run-out ; water power ; product, charcoal blooms.

Springton forge, Cornog & M'Ilvaine, Wallace, Chester county. Very old works ; 4 forge fires and one run-out ; water power ; product, charcoal blooms.

Tyrone forge, Lyon, Shorb & Co., Tyrone, Blair county. Product, blooms.

Union forge, Union forge company, Union Forge, Lebanon county. Very old works ; product, blooms ; annual capacity, 1,000 net tons ; average make, 700 tons.

THE COST OF IRON.

On the publication of a table compiled by Mr. Wm. E. S. Baker, of the Duncannon iron company, Secretary of the Eastern Ironmasters' Association, giving the cost of pig iron on furnace bank and of bar iron at mill, for a series of years, objection was made to the showing of it on the ground that no allowance had been made for interest on capital invested, and that the totals did not, therefore, fairly represent the cost of the iron in the years indicated. Mr. Baker, has accordingly revised the table, and added interest upon the value of the plant necessary to an average production, in which shape we publish it, as given in "The Iron Age."

COST OF AMERICAN PIG AND BAR IRON.

AVERAGE *cost per ton of pig iron on furnace bank, and of merchant bar in mill, from* 1850 *to* 1874, *inclusive. Compiled by Mr. Wm. E. S. Baker, Secretary of the Eastern Iron Masters' association.*

AVERAGE COST OF ANTHRACITE PIG IRON, 1850 TO 1874—RUN OF FURNACE.

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.
Cost of ore to the ton of pig iron	$5 75	$5 44	$5 55	$5 97	$6 65	$7 51	$7 50	$7 75	$7 66	$7 08	$7 45	$7 35	$7 08
Cost of coal to the ton of pig iron	3 70	3 36	3 65	3 23	3 53	4 63	3 90	3 89	4 06	3 26	3 49	3 26	3 68
Cost of limestone to the ton of pig iron	93	96	1 09	1 06	1 38	1 26	1 16	1 14	1 18	1 15	1 21	1 17	1 11
Cost of labor to the ton of pig iron	2 22	1 61	2 02	2 00	2 45	2 85	2 58	2 30	2 10	1 82	1 87	1 97	1 57
Cost of general contingencies	1 65	1 93	2 03	2 62	1 99	2 62	2 91	2 16	2 73	2 83	2 83	2 86	2 67
Cost at furnace bank	14 25	13 30	14 34	14 88	16 00	18 87	18 05	17 24	17 73	16 14	16 85	16 61	16 11
Add interest on capital invested, on a product of 6,000 tons	1 05	1 05	1 15	1 22	1 37	1 29	1 21	1 47	1 22	1 28	1 36	1 57	1 57
Total cost to the producer	15 30	14 35	15 49	16 10	17 37	20 16	19 26	18 71	18 95	17 42	18 21	18 18	17 68

	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874. Mar. 1.
Cost of ore to the ton of pig iron	$7 49	$9 12	$13 13	$12 19	$11 71	$10 92	$11 86	$12 96	$12 67	$13 64	$14 87	$14 75
Cost of coal to the ton of pig iron	3 42	5 41	9 66	7 55	7 44	7 11	7 41	7 08	8 59	7 28	7 45	7 90
Cost of limestone to the ton of pig iron	1 20	1 93	2 85	2 65	2 76	2 51	2 14	2 44	2 08	2 04	1 98	2 03
Cost of labor to the ton of pig iron	2 07	2 85	4 56	3 46	3 99	3 86	3 46	3 89	3 54	4 69	5 11	4 40
Cost of general contingencies	2 35	1 66	2 01	2 03	1 98	1 90	1 96	3 67	2 77	2 93	3 00	2 39
Cost of furnace bank	16 53	20 97	32 21	27 88	27 88	26 30	26 83	30 04	29 65	30 58	32 41	31 47
Add interest on capital invested, on a product of 6,000 tons	1 40	1 59	1 61	1 64	1 80	1 63	1 71	1 85	1 82	1 75	2 08	2 00
Total cost to the producer	17 93	22 56	33 82	29 52	29 68	27 93	28 54	31 89	31 47	32 33	34 49	33 47

COST OF AMERICAN PIG AND BAR IRON—Continued.

AVERAGE COST OF BAR IRON, 1850 TO 1874.

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.
Cost of pig iron to the ton of finished bar iron..	$25 65	$24 90	$25 71	$25 25	$42 17	$42 64	$32 84	$33 34	$30 61	$26 54	$25 61	$25 35	$24 36
Cost of coal to the ton of finished bar iron......	5 70	5 61	5 61	5 81	6 00	8 28	6 59	6 00	5 49	5 17	5 27	5 39	6 19
Cost of labor to the ton of finished bar iron.....	10 43	10 17	10 37	11 06	15 12	14 70	12 85	13 06	11 77	10 68	10 90	11 12	11 78
General contingencies..........................	4 64	4 83	4 88	7 05	10 39	10 78	8 88	10 38	10 84	7 91	8 78	8 71	10 03
Cost in the mill, finished..................	46 42	45 51	46 57	49 17	73 68	76 40	61 16	62 78	58 71	50 30	50 56	50 57	52 36
Add interest on capital invested, on a product of 6,000 tons..................................	1 56	1 49	1 54	1 50	1 80	1 63	1 59	1 89	1 65	1 60	1 71	1 90	1 75
Total cost to the manufacturer.............	47 98	47 00	48 11	50 67	75 48	78 03	62 75	64 67	60 36	51 90	52 27	52 47	54 11

	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	187 3	1874. Mar. 1.
Cost of pig iron to the ton of finished bar iron..	$27 90	$41 40	$68 60	$50 77	$50 64	$44 53	$43 29	$43 63	$40 52	$49 11	$43 24	$41 20
Cost of coal to the ton of finished bar iron......	7 66	8 44	13 03	8 92	9 13	8 64	8 33	8 55	7 55	8 43	8 55	8 46
Cost of labor to the ton of finished bar iron.....	15 14	18 94	27 45	20 61	22 02	19 87	20 65	18 57	17 70	21 55	20 37	19 02
General contingencies..........................	7 66	9 15	18 03	11 50	9 44	7 70	7 75	7 03	7 85	5 74	5 83	5 29
Cost in the mill, finished..................	58 36	77 93	127 11	91 80	91 23	80 74	80 02	77 78	73 62	84 83	77 99	73 97
Add interest on capital invested, on a product of 6,000 tons..................................	1 77	1 80	2 80	2 01	2 05	1 96	2 09	2 15	2 20	2 22	2 25	2 10
Total cost to the manufacturer	60 13	79 73	129 91	93 81	93 28	82 70	82 11	79 93	75 82	87 05	80 24	76 07

Quantity of ore used to make 1 ton of pig iron, average of 20 years..	2·17·0·22 tons.
Quantity of coal used to make 1 ton of pig iron, average of 20 years..	2·00·3·05 "
Quantity of limestone used to make 1 ton of pig iron, average of 20 years..................................	1·04·3·22 "

The above group of furnaces used Juniata and Montour hematite ores, and a little Cornwall. The coal came chiefly from the Wyoming and Lehigh valleys.

Quantity of pig iron used to make 1 ton of finished bar iron, average of 16 years............................	1·05·2·00 tons.
Quantity of coal used to make 1 ton of finished bar iron, average of 16 years............................	1·16·2·19 "

The above rolling mills used gray and white pig iron and Broad Top and Cumberland coal.

PRICES IN PHILADELPHIA OF No. 1 ANTHRACITE FOUNDRY PIG IRON, FROM 1842 TO 1873.—Tons of 2,240 Lbs.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average*
1842	....	....	....	....	$27	$27	$26⅓	$24½	$25⅛	$25	$25	$25	....
1844	$24	$24	$24	$24	24	26⅛	26½	26½	27¼	28	27½	26¾	$25¾
1845	26¾	26½	27¾	33⅛	34⅛	33	31	28⅓	27	26⅞	28⅓	28	29¼
1846	28	28	28¼	28	28½	28	29	26⅛	27¼	27	28½	28⅛	27⅞
1847	28½	28½	28⅝	29	29	28⅝	28	28½	30½	33¾	35¾	33¾	30¼
1848	31	28½	27¼	26⅝	26½	26½	25¾	25⅜	25½	25	25	24⅞	26½
1849	25	24½	24¾	24	†23½	23	†22¾	22½	†21⅛	21½	20	21	†22¾
1850	21	21	20⅔	20⅞	20⅞	20⅛	20	20⅔	21	21	21	21¾	20⅞
1851	21½	22	22	22	21½	21½	21	21	21	21	21	21	21⅜
1852	21¼	21¼	20¾	20⅜	20¼	20½	20¼	21¼	23¼	26½	27¾	28¼	22⅝
1853	32¾	36⅞	35⅝	35⅞	35⅞	36	36	36	36¼	37⅓	37⅝	36¾	36⅛
1854	37	36¼	37	38	38	38	38	38	37¾	36½	35½	32⅞	36⅞
1855	31⅛	29½	27½	26¾	26½	26⅓	26⅛	26½	28	28⅝	28½	27¾	27¾
1856	27½	27½	27⅔	28	28	27⅝	27	27	27	26⅞	26	26	27⅛
1857	26¼	26½	26⅝	27¾	27⅞	27¾	27¼	26¾	26⅜	25¾	23½	23¾	26⅜
1858	23½	22½	22½	22½	22½	22⅛	21⅜	21½	22	21½	21¾	22½	22¼
1859	22¾	23⅝	24½	23⅞	23½	23⅛	23	23⅛	22⅞	23¼	23¼	23⅛	23⅜
1860	23	23	23⅜	22⅜	22¾	22¾	22¾	22½	22¼	22⅜	22¾	22½	22¾
1861	22⅛	21¾	21¼	21⅞	21⅛	20½	19⅞	18¾	18¾	‡18⅝	18⅞	19⅝	‖20¼
1862	20	20¾	20¾	21½	21½	22¾	24	24⅜	24½	25¼	30½	31⅛	23⅞
1863	32	33¼	35½	36	34¾	33½	32¾	31¾	33	35¾	41⅛	43½	35¼
1864	43⅛	48⅝	50⅛	54½	57¼	57⅝	69⅛	§73⅝	72¼	63¾	61½	59⅛	¶59¼
1865	58⅛	53⅛	50⅜	45½	39⅛	35	35⅔	40⅛	44⅓	49⅞	51	50¾	46½
1866	50⅜	49	46⅓	41¾	41⅜	43⅞	46½	47¼	48⅓	48¾	49½	49½	46⅞
1867	48¾	46½	44¾	41	42¾	43	43⅓	44	44½	44½	43¾	42⅛	44⅛
1868	38⅔	36¾	37⅞	38¼	37	37	38⅓	39½	40⅛	41⅜	42⅞	43¼	39¼
1869	42	40¼	41½	40	39½	40⅞	41⅝	41⅛	40¾	40½	39¾	39½	40⅝
1870	36¼	34½	34½	33¼	33¼	32½	32¾	33½	33¼	32¼	31½	31¼	33¼
1871	30½	30⅞	34¼	35⅜	35½	35	35¾	36	36½	36⅔	37¼	37¼	35⅛
1872	37	40¾	47	49½	49½	53⅜	51⅓	52¾	53⅞	53⅓	51¼	47⅝	48⅞
1873	45⅛	48	48⅜	47¾	46	45	43¾	43½	42½	38	33	32½	42¾

* Average for year to nearest *eighth*.
† Uncertain.
‡ Lowest average for month, $18⅝—October, 1861.
§ Highest average for month, $73⅝—August, 1864.
‖ Lowest average for year, $20¼—1861.
¶ Highest average for year, $59¼—1864.

From 1842 to July, 1866, averaged monthly from weekly quotations in Philadelphia and New York prices current. From July, 1866, to 1873, averaged from weekly quotations in bulletin of the American iron and steel association.

PRICES OF AMERICAN IRON RAILROAD BARS IN PHILADELPHIA FOR TWENTY-SIX YEARS, FROM 1847 TO 1873.

Tons of 2,240 Lbs.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average	Average price of gold
1847	....	$71⅔	$70⅛	$70	$70	$70	$69½	$69½	$67⅛	$67	$67½	$67½	....	100
1848	$63	63	63	63	63	63	63	61⅞	61⅓	61	61	61	$62¼	100
1849	61	57½	53¾	53⅓	54¼	53½	53½	53¼	52	51½	51½	51½	53⅞	100
1850	47	47½	48	49	49	50	46	46¾	47½	48	48	†48	†47⅞	100
1851	43	†45	47½	45	45	48	46	45½	45	45	46	†46¼	†45⅝	100
1852	46½	46½	46½	46½	46½	46½	46½	46½	47¾	49⅓	51	61	48⅜	100
1853	74⅛	77½	77½	77½	77½	77½	77½	77½	77½	77½	77½	77½	77¼	100
1854	81	81	81	81	81	81	81	81	81	81	77½	73½	80⅛	100
1855	70	65	62½	62½	60	58⅓	59½	59½	64½	65	65	63	62⅞	100
1856	62½	62⅛	63⅜	65	65	65	65	65	65	65	65	64	64⅜	100
1857	65½	65½	64½	65¾	67	67	67	67	67	67	58½	50	64¼	100
1858	50	50	50	50	50	50	50	50	50	50	50	50	50	100
1859	49¾	49¼	49¼	50⅛	50¼	50¼	49¾	48¾	48¾	48¾	48¾	48¾	49⅜	100
1860	48¾	48¾	48¾	48¾	48¾	48¾	48¾	46	47	47½	47½	46⅛	48	100
1861	44	44	44	44	44	44	44	43⅛	43	41⅜	‡36½	‡36½	42⅜	100
1862	‡36½	‡36½	41½	41½	41½	41½	41½	41½	43	43¾	46	46	‖41¾	113
1863	72½	69¾	72¼	73½	73½	78¾	81½	73⅜	72½	79½	87½	87½	76⅞	145
1864	94	101¼	105	111	120	127⅓	141½	152½	§153¾	140	133¾	132	¶126	202
1865	125⅝	121¼	116¼	108½	90¼	84¼	82½	86¼	90	92½	95	91	98⅝	157
1866	90	90	87¾	84¾	84	85¾	86⅜	87	87⅝	87⅞	85	85	86¾	140
1867	85	85	84¼	82⅞	82½	82½	82½	82½	82½	82½	82½	82½	83⅛	138
1868	81⅔	79	79	79	79	79	79	79	79	78¼	76	78¾	78⅞	140
1869	76¾	76	76	76	76	76	76	80	78½	78½	78½	78½	77¼	136
1870	74	72½	72½	72½	72⅛	72½	72½	72½	72½	72½	70½	70	72¼	115
1871	68¼	69	69	69½	71	71	71	71	71	71	71	71	70⅜	112
1872	71⅓	75⅝	81⅛	83⅞	90½	90	89	87¾	88¾	88¾	88¾	85½	85⅛	112
1873	83⅓	83	83	82	80	78	76	75	75	70	61	61	75⅔	112

* For latter part of 1857 prices were probably only nominal.

† Uncertain.

‡ Lowest months, $36½—{ November and December, 1861. January and February, 1862.

§ Highest month, $153¾—September, 1864.

‖ Lowest year, $41¾—1862.

¶ Highest year, $126—1864.

Prices averaged for years to nearest *eighth*.

From 1847 to 1866 from Philadelphia prices current, except for years 1850 and 1851, for which estimates were furnished by Mr. S. J. Reeves. From 1866 to 1873 from bulletin of the American iron and steel association, averaged from weekly quotations.

The annual premium on gold is calculated from daily quotations of gold sales in the *Banker's Magazine*.

THE PITTSBURG PIG IRON MARKET FOR 1873 AND 1874, AS PRESENTED IN THE COLUMNS OF THE "AMERICAN MANUFACTURER."

On the following pages we give our readers annual tables showing the prices of all grades of iron in Pittsburg for the past two years by months. A word or two as to the scope of these tables will prevent any misrepresentations. They represent only the sales that have been from week to week reported in the *Manufacturer*. At times, for reasons that are apparent, brokers have not thought best to report certain sales, but these will not probably exceed 10 per cent. of the entire amount. Sales are often made direct from the furnace without passing through the broker's hands. These are not reported except in a very few instances. The column of "average price" is the actual average price, and not the average of prices. For example, if 10 tons were sold at $30, and 100 at $40, the average price would be $39 09, and not as would be given in most instances, $35. The former figures would be the average price; the latter the average of prices. The figures given in the tables are the average prices. The difference in the volume of business for the two years will be better understood by the following table:

	1873.		1874.
Sales of all grades—January....	41,438	Sales of all grades—January...	18,395
Do......do.......February...	20,146	Do......do.......February..	13,361
Do......do.......March......	15,925	Do......do.......March.....	6,887
Do......do.......April.......	7,970	Do......do.......April......	18,466
Do......do.......May........	11,658	Do......do.......May.......	11,946
Do......do.......June........	13,056	Do......do.......June......	13,736
Do......do.......July........	15,071	Do......do.......July......	23,422
Do......do.......August.....	10,800	Do......do.......August....	10,887
Do......do.......September..	17,729	Do......do.......September,	12,995
Do......do.......October.....	4,523	Do......do.......October....	7,665
Do......do.......November..	43,214	Do......do.......November,	6,067
Do......do.......December..	28,820	Do......do.......December,	2,646
Total......................	191,460	Total......................	146,453

The totals of the two years are not as different as the course of business might at first lead one to suppose, it being mainly anthracite irons, the amount of these irons reported in 1873 being 43,757, and in 1874 only 8,996 tons. Prices have been so low that when the difference in freight was considered iron could not be sent from the east to this market.

In prices there has been a marked difference in the two years. In 1873 the highest price for gray forge, bituminous, which is the standard iron in this market, was $44 00, the lowest being $24 00. While the market has been lower in 1874, there is not the same relative difference between the highest and lowest price as in 1873, the highest being $32 00, and the lowest $23 00. The decline from the highest price, which was in January, has been gradual.

We give below the average prices of good gray coke iron by months for 1873 and 1874:

MONTHS.	1873.	1874.	MONTHS.	1873.	1874.
January	$40 25	$30 43	July	$35 55	$26 90
February	43 00	30 87	August	34 23	26 62
March	41 89	28 64	September	34 34	26 64
April	41 62	27 58	October	31 95	26 13
May	40 47	26 85	November	25 38	25 08
June	37 04	26 79	December	29 22	24 08

THE PITTSBURG PIG IRON MARKET FOR 1873 AND 1874—CONTINUED.

GRADE OF IRON.	JANUARY.								FEBRUARY.								MARCH.							
	1873.				1874.				1873.				1874.				1873.				1874.			
	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,
Bituminous and Coke:—																								
No. 1, foundry*	750	$45 00	$44 00	$44 12	850	$35 00	$30 00	$33 21	50	$43 00	$43 00	$43 00	330	$36 00	$33 00	$34 94	195	$48 00	$44 00	$45 07	3,405	$35 00	$31 50	$33 23
No. 2, foundry	590	42 50	42 00	42 04	1,140	34 00	30 00	30 16	......	......	......	......	60	33 00	32 00	32 83	860	44 00	42 50	42 60	60	33 00	30 00	31 41
Gray forge, open	24,450	43 00	38 50	40 25	8,110	32 00	29 00	30 35	420	43 00	43 00	43 00	970	31 50	31 00	31 23	3,050	44 00	40 00	41 89	2,060	30 00	28 00	29 32
Gray forge, medium†	5,170	40 00	38 00	39 34	3,250	32 00	28 00	30 43	8,200	40 00	37 25	39 54	9,260	32 00	29 00	30 87	3,270	43 00	37 25	41 40	790	31 00	27 00	28 64
Gray forge, close	1,750	40 00	38 00	38 77	910	29 50	25 00	27 13	1,530	40 00	38 00	38 88	250	30 50	30 50	30 50	2,150	43 50	38 00	40 27	......	......	......	......
Mottled	......	......	......	......	100	30 00	27 00	28 20	675	40 00	37 00	39 18	130	28 00	28 00	28 00	......	......	......	......	......	......	......	......
White	......	......	......	......	......	......	......	......	350	39 00	37 00	37 85	......	......	......	......	......	......	......	......	10	28 00	28 00	28 00
White and mottled	690	38 00	35 00	35 84	150	27 00	27 00	27 00	1,300	40 00	38 00	38 77	60	28 00	28 00	28 00	2,200	40 00	38 00	39 60	......	......	......	......
Silvery	370	41 00	40 00	40 60	275	27 00	27 00	27 00	200	36 00	36 00	36 00	......	......	......	......	700	42 00	37 00	39 14	10	27 00	27 00	27 00
Total	33,770	......	......	......	14,785	......	......	......	12,725	......	......	......	11,060	......	......	......	12,425	......	......	......	6,335	......	......	......
Anthracite:—																								
No. 1, foundry	590	48 00	44 00	46 21	540	35 50	32 00	34 67	1,025	51 50	45 00	46 43	90	41 00	33 00	36 55	550	48 00	45 00	46 05	230	35 00	32 00	34 61
No. 2, foundry	1,310	46 50	41 00	43 48	130	35 00	33 00	33 46	390	48 00	42 00	44 01	100	30 00	30 00	30 00	550	45 00	42 00	40 66	50	35 00	32 00	33 50
Gray forge, open	1,470	44 00	37 00	40 02	1,180	30 00	28 00	29 77	350	42 00	40 00	40 56	......	......	......	......	700	42 00	40 00	40 81	150	29 00	28 00	28 66
Gray forge, medium	1,200	39 00	42 00	39 90	350	30 00	29 00	29 85	1,500	42 00	38 00	39 43	1,100	30 00	30 00	30 00	170	41 00	41 00	41 00	......	......	......	......
Gray forge, close	150	40 00	40 00	40 00	450	29 00	29 00	29 00	400	38 00	38 00	38 00	100	30 00	30 00	30 00	120	43 00	40 00	41 25	......	......	......	......
Mottled	1,650	38 00	36 50	37 50	400	28 00	28 00	28 00	1,480	39 00	35 00	37 02	......	......	......	......	500	39 00	39 00	39 00	......	......	......	......
White	......	......	......	......	100	26 00	26 00	26 00	800	37 00	33 00	35 54	......	......	......	......	100	39 00	39 00	39 00	......	......	......	......
White and mottled	1,260	38 00	35 00	36 14	......	......	......	......	40	38 00	38 00	38 00	......	......	......	......	......	......	......	......	......	......	......	......
Silvery	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Total	7,630	......	......	......	3,150	......	......	......	5,980	......	......	......	1,390	......	......	......	2,690	......	......	......	430	......	......	......
Charcoal:—																								
No. 1, foundry	38	58 00	58 00	58 00	230	48 00	40 00	43 20	805	58 00	58 00	58 00	245	43 00	38 50	41 14	471	58 00	54 00	56 66	62	42 00	40 00	41 32
No. 2, foundry	......	......	......	......	195	38 00	34 00	36 55	......	......	......	......	401	38 50	34 00	37 14	190	58 00	55 00	55 57	......	......	......	......
Gray forge	......	......	......	......	40	47 00	47 00	47 00	......	......	......	......	160	35 00	34 00	34 69	80	56 50	55 00	56 31	10	47 00	47 00	47 00
Cold blast	......	......	......	......	......	......	......	......	726	69 50	55 00	63 67	105	56 00	47 00	49 95	70	68 00	62 00	67 14	50	55 00	50 00	52 50
Total	38	......	......	......	465	......	......	......	1,531	......	......	......	911	......	......	......	811	......	......	......	122	......	......	......
Total all kinds	41,438	......	......	......	18,395	......	......	......	20,146	......	......	......	13,361	......	......	......	15,925	......	......	......	6,887	......	......	......

* Including Bessemer.

† Including all iron reported as Gray Forge without giving grade.

THE PITTSBURG PIG IRON MARKET FOR 1873 AND 1874—CONTINUED

GRADE OF IRON.	APRIL.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price ..	Average price.	No. of tons....	Highest price..	Lowest price ..	Average price.
Bituminous and Coke:—								
No. 1, foundry*	220	$45 50	$45 50	$45 50	650	$35 00	$30 00	$32 40
No. 2, foundry	70	45 00	44 00	44 50	430	32 00	28 50	29 39
Gray forge, open	3,300	43 50	40 00	41 62	2,420	29 00	27 00	27 46
Gray forge, medium†	959	42 00	39 00	41 05	12,965	28 50	26 00	27 58
Gray forge, close					100	28 00	28 00	28 00
Mottled	400	41 00	40 00	40 75	50	27 00	27 00	27 00
White					50	26 00	26 00	26 00
White and mottled	100	40 00	40 00	40 00	1,000	28 00	24 00	26 94
Silvery	25	38 00	38 00	38 00	150			
Total	5,065				17,905			
Anthracite:—								
No. 1, foundry	450	47 00	46 00	46 20	100	35 00	32 00	33 20
No. 2, foundry	180	44 00	42 00	43 00	160	33 00	27 00	30 62
Gray forge, open	900	42 00	49 50	41 60				
Gray forge, medium								
Gray forge, close	300	43 00	41 00	41 66				
Mottled	100	38 00	38 00	38 00	20	27 00	27 00	27 00
White	20	35 50	35 25	35 37				
White and mottled	450	39 00	39 00	39 00				
Silvery	10	40 00	40 00	40 00				
Total	2,410				280			
Charcoal:—								
No. 1, foundry	400	58 50	56 00	57 25	173	50 00	38 00	41 08
No. 2, foundry	75	P.T.	P.T.	P.T.	83	42 00	37 00	39 65
Gray forge								
Cold blast	120	68 00	60 00	62 00	25	66 00	50 00	53 20
Total	495				281			
Total all kinds	7,970				11,946			

GRADE OF IRON.	MAY.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price ..	Average price.	No. of tons....	Highest price..	Lowest price ..	Average price.
Bituminous and Coke:—								
No. 1, foundry*	220	$45 00	$44 00	$44 49	955	$33 00	$27 00	$29 54
No. 2, foundry	310	42 00	40 00	40 42	70	29 00	28 00	28 71
Gray forge, open	1,910	43 00	38 00	40 47				
Gray forge, medium†	1,950	41 50	37 50	38 49	9,060	28 25	25 00	26 85
Gray forge, close	700	40 00	38 00	38 57	520	27 00	26 00	26 31
Mottled	190	38 00	38 00	38 00	200	26 50	25 00	25 37
White					290	24 50	23 00	24 44
White and mottled	30	38 50	38 50	38 50				
Silvery	90	40 00	38 00	38 86	20	25 00	25 00	25 00
Total	5,400				11,115			
Anthracite:—								
No. 1, foundry	490	51 50	42 00	44 68	29	30 00	30 00	30 00
No. 2, foundry	665	44 00	40 00	42 04				
Gray forge, open	700	42 00	35 00	39 23	100	27 00	27 00	27 00
Gray forge, medium	500	38 00	37 00	37 30	160	27 50	25 50	27 12
Gray forge, close	165	38 00	32 50	33 70				
Mottled	502	36 00	35 00	35 27				
White	740	36 00	32 00	33 81				
White and mottled	300	37 00	36 50	36 75				
Silvery	10	40 00	40 00	40 00				
Total	4,052				280			
Charcoal:—								
No. 1, foundry	226	59 00	54 00	57 22	257	50 00	38 00	40 34
No. 2, foundry	700	55 00	55 00	55 00	234	37 00	32 00	34 21
Gray forge	1,200	55 00	40 00	52 50				
Cold blast	180	63 00	62 00	62 83	60	55 00	50 00	52 50
Total	2,206				551			
Total all kinds	11,658				11,946			

GRADE OF IRON.	JUNE.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price ..	Average price.	No. of tons....	Highest price..	Lowest price ..	Average price.
Bituminous and Coke:—								
No. 1, foundry*	160	$45 00	$43 00	$43 50	480	$30 00	$30 00	$30 00
No. 2, foundry	180	40 00	37 00	38 06	70	29 00	28 00	28 71
Gray forge, open	3,430	38 00	35 00	37 04	500	27 25	26 00	26 30
Gray forge, medium†	2,660	38 00	35 00	36 32	9,760	28 00	25 00	26 79
Gray forge, close	150	36 00	36 00	36 00	600	26 00	26 00	26 00
Mottled								
White								
White and mottled	150	32 00	32 00	32 00	800	26 00	25 00	25 75
Silvery								
Total	6,730				12,210			
Anthracite:—								
No. 1, foundry	490	50 00	40 00	42 85	590	31 00	28 00	30 49
No. 2, foundry	230	46 00	38 00	39 91	100	26 50	26 50	26 50
Gray forge, open	310	37 50	37 50	37 50				
Gray forge, medium	1,520	38 00	34 00	35 89	330	27 00	26 50	26 8
Gray forge, close	760	38 00	35 00	36 16				
Mottled	550	36 00	32 00	35 00				
White	1,250	35 00	31 50	32 50				
White and mottled								
Silvery	10	35 00	35 00	35 00				
Total	5,120				1,020			
Charcoal:—								
No. 1, foundry	705	58 00	54 00	55 17	421	50 00	36 00	47 77
No. 2, foundry	171	52 00	50 00	50 39	50	34 00	34 00	34 00
Gray forge	320	47 50	47 50	47 50				
Cold blast	10	60 00	60 00	60 00	35	63 00	50 00	51 86
Total	1,206				506			
Total all kinds	13,056				13,736			

* Including Bessemer.

† Including all iron reported as Gray Forge without giving grade.

THE PITTSBURG PIG IRON MARKET FOR 1873 AND 1874—CONTINUED.

GRADE OF IRON.	JULY.								AUGUST.								SEPTEMBER.							
	1873.				1874.				1873.				1874.				1873.				1874.			
	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,	No. of tons....	Highest price..	Lowest price...	Average price,
Bituminous and Coke:—																								
No. 1, foundry*	150	$44 00	$38 00	$39 33	650	$31 00	$27 00	$30 47	3,770	$41 50	$36 00	$37 28	780	$30 00	$28 00	$28 93	610	$41 00	$36 00	$38 53	740	$30 00	$27 00	$28 86
No. 2, foundry	360	41 00	36 00	36 77	40	28 00	27 00	27 50	900	40 00	32 00	32 63	450	28 00	27 00	27 35	425	40 00	34 00	38 52	550	29 00	27 00	27 22
Gray forge, open	4,470	36 00	34 00	35 55	......	......	......	......	490	35 00	33 00	34 23	......	......	......	......	3,370	35 00	33 50	34 34	90	27 00	27 00	27 00
Gray forge, medium†	2,050	35 50	34 00	35 19	17.640	28 00	25 00	26 90	2,350	35 00	32 50	34 01	7,680	27 00	25 00	26 62	5,720	34 00	32 00	33 36	8,765	28 00	25 00	26 64
Gray forge, close	600	34 00	33 00	33 50	......	.....	......	......	......	......	......	......	200	25 50	24 00	24 75	270	34 00	32 00	32 52	370	26 00	25 00	25 73
Mottled	650	33 00	31 00	31 69	500	26 00	26 00	26 00	400	33 00	32 00	32 50	500	25 00	24 50	24 90	820	30 50	30 50	30 50	350	25 00	25 00	25 00
White	450	34 00	32 00	32 68	100	25 00	25 00	25 00	300	31 00	30 00	30 50	160	20 00	20 00	20 00	440	34 00	30 00	31 45	130	26 00	23 50	25 04
White and mottled	......	......	......	......	1,650	26 00	25 00	25 51	50	34 00	34 00	34 00	260	25 00	24 50	24 77	800	32 00	31 00	31 62	1,260	25 00	23 50	24 61
Silvery	......	......	......	......	40	26 50	26 50	26 50	......	......	......	......	20	25 00	25 00	25 00	200	33 00	33 00	30 00	......	......	......	......
Total	8,730	......	......	......	26,620	......	......	......	8,260	......	......	......	9,990	......	......	......	12,670	......	......	......	12,255	......	......	......
Anthracite:—																								
No. 1, foundry	310	43 00	38 00	41 20	710	36 00	28 00	30 52	350	42 00	38 00	40 26	50	31 00	27 00	29 00	530	40 00	37 00	37 51	20	31 00	31 00	31 00
No. 2, foundry	580	43 00	35 75	37 27	330	37 00	26 50	29 71	360	38 00	30 00	35 18	......	......	......	......	780	36 50	32 00	33 09	20	27 00	27 00	27 00
Gray forge, open	1,530	36 00	34 00	34 75	......	......	......	......	280	35 00	32 50	34 19	......	......	......	......	360	33 00	31 50	32 75	......	......	......	......
Gray forge, medium	430	34 50	31 00	32 84	100	26 00	26 00	26 00	1,110	35 00	32 00	33 56	545	27 00	25 00	26 91	690	37 50	31 00	34 50	100	27 00	27 00	27 00
Gray forge, close	850	31 00	31 00	31 00	......	......	......	......	......	......	......	......	......	......	......	......	1,700	34 00	30 00	31 50	......	......	......	......
Mottled	1,510	33 00	30 00	30 03	......	......	......	......	......	......	......	......	......	......	......	......	200	32 00	32 00	32 00	......	......	......	......
White	400	34 00	31 00	34 00	100	24 00	24 00	24 00	......	......	......	......	......	......	......	......	300	31 00	31 00	31 00	......	......	......	......
White and mottled	......	......	......	......	20	25 00	25 00	25 00	120	34 00	32 00	32 33	......	......	......	......	......	......	......	......	20	24 00	21 00	24 00
Silvery	3,310	32 00	32 00	32 00	......	......	......	......	......	......	......	......	......	......	......	......	20	30 00	30 00	30 00	......	......	......	......
Total	5,920	......	......	......	1,260	......	......	......	2,220	......	......	......	595	......	......	......	4,580	......	......	......	160	......	......	......
Charcoal:—																								
No. 1, foundry	206	55 00	52 00	53 54	146	40 00	30 00	35 10	210	56 00	52 00	53 38	198	38 00	35 00	36 55	294	53 00	48 00	50 67	235	38 00	35 00	37 16
No. 2, foundry	111	51 00	49 00	49 61	421	45 00	30 00	45 02	90	55 00	47 00	49 17	75	31 50	30 00	30 75	140	47 00	45 00	46 21	20	34 00	34 00	34 00
Gray forge	31	P.T.	P.T.	P.T.	850	27 00	26 00	23 86	......	......	......	......	......	......	......	.....	77	43 00	40 00	41 81	125	31 00	31 00	31 00
Cold blast	80	58 00	58 00	58 00	125	48 00	47 00	47 96	20	58 00	58 00	58 00	30	50 00	40 00	43 33	31	68 00	68 00	68 00	200	55 00	43 00	49 92
Total	427	......	......	......	1,542	......	......	......	320	......	......	.....	302	......	......	......	542	......	......	......	580	......	......	......
Total all kinds	15,071	......	......	......	23,422	......	......	......	10,800	......	......	......	10,887	......	......	......	17,792	......	......	......	12,995	......	......	......

*Including Bessemer.

†Including all iron reported as Gray Forge, without giving grade.

THE PITTSBURG PIG IRON MARKET FOR 1873 AND 1874—CONTINUED.

GRADE OF IRON.	OCTOBER.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price..	Average price,	No. of tons....	Highest price..	Lowest price..	Average price,
Bituminous and Coke:—								
No. 1, foundry*	725	$38 00	$32 00	$36 77	620	$30 00	$27 00	$28 23
No. 2, foundry	200	38 00	34 00	35 10	470	29 00	26 50	27 11
Gray forge, open	850	34 00	28 00	31 95	270	27 00	25 00	25 88
Gray forge, medium†	540	34 00	30 00	32 05	3,820	28 00	25 00	26 13
Gray forge, close	300	33 00	30 50	31 33	300	25 50	25 00	25 33
Mottled	100	29 00	29 00	29 00	940	25 00	25 00	24 48
White								
White and mottled	270	32 50	30 00	31 70	710	24 00	23 00	25 83
Silvery					100	26 00	26 00	26 00
Total	2,985				7,240			
Anthracite:—								
No. 1, foundry	135	40 00	39 00	39 67				
No. 2, foundry	90	36 00	32 50	34 44	50	26 00	26 00	26 00
Gray forge, open	150	32 00	30 00	31 00				
Gray forge, medium	460	32 00	29 50	31 28	150	26 50	24 00	25 66
Gray forge, close								
Mottled	100	34 00	34 00	34 00				
White	180	29 50	29 50	29 50				
White and mottled								
Silvery								
Total	1,115				200			
Charcoal:—								
No. 1, foundry	215	50 00	48 00	49 00	160	36 00	34 00	34 66
No. 2, foundry	165	44 00	44 00	41 00	65	34 00	30 00	30 61
Gray forge	43	P.T.	P.T.	P.T.				
Cold blast								
Total	423				225			
Total of all kinds	4,523				7,665			

GRADE OF IRON.	NOVEMBER.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price..	Average price,	No. of tons....	Highest price..	Lowest price..	Average price,
Bituminous and Coke:—								
No. 1, foundry*					200	$30 00	$26 50	$27 42
No. 2, foundry	330	$32 00	$31 00	$36 71	130	29 00	25 50	26 52
Gray forge, open	2,290	28 00	25 00	25 38				
Gray forge, medium†	1,200	30 00	30 00	30 00	4,910	27 00	24 00	25 08
Gray forge, close					50	24 50	24 50	24 50
Mottled					50	23 50	23 50	23 50
White					100	22 50	22 50	22 50
White and mottled					100	23 00	23 00	23 00
Silvery								
Total	3,820				5,540			
Anthracite:—								
No. 1, foundry	70	41 00	36 00	37 42	20	32 50	30 00	31 25
No. 2, foundry								
Gray forge, open	200	28 00	28 00	28 00				
Gray forge, medium					50	25 00	25 00	25 00
Gray forge, close								
Mottled								
White								
White and mottled	20	25 00	25 00	25 00				
Silvery	10	32 00	32 00	32 00				
Total	300				70			
Charcoal:—								
No. 1, foundry	225	52 00	48 00	50 00	277	36 00	31 00	33 53
No. 2, foundry	20	45 00	45 00	45 00	110	33 00	32 00	32 91
Gray forge								
Cold blast					70	55 00	45 00	52 28
Total	245				457			
Total of all kinds	4,324				6,067			

GRADE OF IRON.	DECEMBER.							
	1873.				1874.			
	No. of tons....	Highest price..	Lowest price..	Average price,	No. of tons....	Highest price..	Lowest price..	Average price,
Bituminous and Coke:—								
No. 1, foundry*	430	$36 00	$29 00	$30 55	295	$28 00	$25 50	$26 66
No. 2, foundry	1,825	32 00	29 00	30 51	130	24 00	24 00	24 00
Gray forge, open	12,160	30 00	25 00	29 22				
Gray forge, medium†	8,880	29 00	24 00	26 53	1,530	24 50	23 00	24 08
Gray forge, close	2,510	28 00	25 00	25 89	30	23 50	23 50	23 50
Mottled	240	27 00	26 50	26 79	100	23 00	23 00	23 00
White								
White and mottled	520	27 00	23 00	23 50				
Silvery	295	31 00	27 00	27 27				
Total	26,860				2,085			
Anthracite:—								
No. 1, foundry	130	36 00	32 00	34 58				
No. 2, foundry	200	31 00	29 00	30 00	151	29 00	28 00	28 66
Gray forge, open	620	30 00	26 00	29 09				
Gray forge, medium	430	30 00	26 00	28 00				
Gray forge, close								
Mottled	170	26 00	26 00	36 00				
White	100	26 00	26 00	22 00				
White and mottled								
Silvery	90	25 00	25 00	25 00				
Total	1,740				151			
Charcoal:—								
No. 1, foundry	50	50 00	40 00	44 00	390	45 00	30 00	30 88
No. 2, foundry	100	45 00	37 00	42 00				
Gray forge	20	P.T.	P.T.	P.T.				
Cold blast	50	50 00	48 00	48 80	20	52 00	43 00	47 50
Total	220				410			
Total of all kinds	28,820				2,646			

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* Including Bessemer.

† Including all iron reported as Gray Forge without giving grade.

THE STATISTICS OF MINING IN THE STATE OF PENNSYLVANIA, AT THE CENSUS OF 1870.

MINERALS.	Establishments..	STEAM ENGINES.		WATER WHEELS.		HANDS EMPLOYED.					CAPITAL.	WAGES.	MATERIALS.	PRODUCTS.	
		Horse power....	Number ...	Horse power....	Number ...	All.........	Men above ground....	Men under ground....	Boys above ground....	Boys under ground....	Dollars	Dollars	Dollars	Tons	Dollars ....
Coal, anthracite	229	48,809	829	331	7	53,621	13,844	30,099	5,500	3,578	50,936,785	22,982,813	3,596,440	15,650,275	38,436,745
Coal, bituminous	359	1,851	69	......	......	16,851	3,481	13,036	29	305	16,974,918	8,995,495	604,691	7.798,518	13,921,069
Copper	2	....	....	......	......	7	7	....	....	....	30,500	2,640	2,018	(*)	7,800
Iron ore	186	3,789	163	38	3	4,886	2,551	2,139	196	....	4,548,026	2,051,345	388,964	1,095,486	3,944,146
Marble	6	142	5	......	......	86	86	....	....	....	226,000	39,320	6,210	(*)	101,000
Nickel	1	130	2	......	......	48	26	....	22	....	60,000	6,400	1,800	400	24,000
Petroleum	2,148	20,943	2,095	......	......	4,070	4,070	....	....	....	9,249,283	3,797,818	1,293,177	(†)171,207,622	18,045,967
Slate	28	237	9	42	6	732	731	....	1	....	1,502,339	325,447	71,310	(*)	618,229
Stone	126	93	6	8	1	1,114	1,112	....	2	....	732,425	446,277	79,484	(*)	873,879
Zinc	1	676	12	......	......	400	180	180	40	....	400,000	167,721	25,823	19,375	235,555
Total	3,086	76,670	3,190	419	17	81,215	26,088	45,454	5,790	3,883	84,660,276	38,815,276	6,069,917	....	76,208,390

(*) Quantities not specified.

(†) Gallons.

OIL TRADE.

PITTSBURG OIL TRADE.

Office of the "Pittsburg Commercial."
Thursday, *September*, 17, 1874.

NEW FREIGHT ARRANGMENT.

A new system of freight rates, by which all refineries, whether located here or in Cleveland or Titusville, are to be placed on an equal footing, by means of a drawback, has been agreed upon by the Pennsylvania Central, Atlantic and Great Western, the Northern Central and Erie railways. The new arrangement is stated in a circular which has been issued, and from which we extract the following:

Commencing October 1, 1874, the following rates on refined and crude oil shall govern the market:

The rates on refined oil from oil refineries at Cleveland, or Titusville or elsewhere in and adjacent to the oil region shall be as follows:

To Boston, $2 10 per barrel.

To Philadelphia, $1 85 per barrel.

To Baltimore, $1 85 per barrel.

To New York, $2 00 per barrel.

From which shall be refunded the amount paid for the transportation of the crude oil by rail from the mouth of the pipes to the said refineries, upon the basis of fourteen barrels of crude oil to the refiners, for every ten barrels of refined oil forwarded by rail from them (the refiners) to the eastern points named.

Settlements of this drawback to be made on the refined oil forwarded during each month.

You will observe that under this system the rate is even and fair to all parties, preventing one locality taking advantage of its neighbor, by reason of some alleged or real facility it may possess.

Oil refiners and shippers have asked the road from time to time, to make all rates even and they would be satisfied. This scheme does it, and we trust it will work satisfactorily to all.

It will be seen that by this arrangement the railroads will carry crude oil free to Cleveland, Pittsburg, Titusville and other refineries free of charge. That is the refiners pay for freight on crude oil, but when the petroleum has been refined and shipped to the seaboard, the amount paid on the crude is returned. To give refineries at the seaboard an equal favor, one thousand barrels of crude oil will be carried to New York for the same price as the refined oil which the thousand barrels of crude would make, can be transported.

The effect of this arrangement will be to partially benefit the business of our oil refiners, by improving freight rates, and removing the inequalities which have heretofore existed in favor of points less advantageously located than Pittsburg It does not, however, place Pittsburg in the position which it ought to occupy by virtue of its material advantages for the oil refining trade. That position can only be secured by the establishment of competition in the transportation of oil. The completion of the Columbia Conduit company's pipe line, or of any similar enterprise, which will enable the Baltimore and Ohio road to enter into the business, will insure the establishment of the lowest living rates at which oil can be transported. That consummation is one which the oil men of this city need. The welfare of that business does not require any gifts, nor is it for its interest to be subject to the dictum of any one transportation company, but when the establishment of competing lines shall insure that crude oil shall be brought to their refineries, and the refined product taken away, at the lowest practicable rates, the oil trade of Pittsburg need be second to none in the country.

The Oil City *Derrick* suggests a constitutional difficulty in this connection as follows: "But the railroads appear to have forgotten that a new Constitution was adopted in this State last year, and that one of the sections of said Constitution positively prohibits any favor between transportation companies and individuals or corporations, by abatements or drawbacks. The people made this a law, and it remains to be seen if they will allow the railroad companies to break it, by putting in force this arrangement, which has for its basis certain drawbacks or rebates in favor of shippers and refiners."

PIPE LINE REPORTS.

We find in the Oil City and Titusville papers, the reports of the various pipe companies up to August 31. It is said by the Oil City *Derrick* that there is an evident intention on the part of some of the companies to evade the law in making their statements. We give below the report of stocks on hand August 31, so far as received:

	Barrels.
United pipe company	911,629 81
Union pipe company	394,568 48
Pennsylvania transportion company	163,199 22
Titusville pipe company	30,262 50
New York pipe company	18,744 19
Grant pipe company	69,309 77
Octave oil company	17,684 21
Church Run oil company	7,410 89
Sandy pipe company	39,328 91
Milton pipe company	49,695 20
Sage Run pipe company	5,445 23
Antwerp and Oil City pipe company	150,000 00
Karns pipe company	157,507 42
Tidioute pipe company	23,292 88
New York and Allegheny oil company	13,369 78
Tidioute and Warren oil company	17,100 00
Fisher's pipe company	14,000 00
Sage Run pipe company	5,445 23
American transfer company	82,500 00
Cherrytree pipe company	9,500 00
Total stock on hand	2,179,993 72

The above shows an increase in stock during the past month of 453,354 barrels, the stock at the last report, having been 1,726,639 barrels.

OFFICIAL OIL RETURNS.

TABLE *of returns from parties engaged in the storage and transportation of petroleum oil, for the quarter ending September* 30, 1874, *made pursuant to act of* 15*th May, A. D.* 1874.

COMPANIES.	Postoffice.	Barrels, (42 gallons.)
American Transfer company	St. Petersburg	135,939.61
Antwerp Pipe company	St. Petersburg	116,848.18
Church Run Pipe company	Titusville	9,562.68
Charles Run Pipe company	Oil City	8,352.00
Delaware River Storage company	112 Walnut st., Phila.,	*126,986.00
Franklin Pipe line	Franklin	9,169.39
Grant Pipe company	Parker	154,087.24
Karns Pipe line	Parker	253,572.41
Munhall, John & Co.	Oil City	52,471.00
New York and Allegheny Oil company	Tidioute	19,911.79
New York Pipe company	Titusville	41,093.01
Octave Oil company	Titusville	17,629.92
Oil City Pipe company	St. Petersburg	78,885.86
Pennsylvania Transportation company	Titusville	145,979.03
Prentice, F. & Co	Coal City	23,340.00
Rochester and Oleopolis	Oil City	33,856.33
Relief Pipe line company	Millerstown	198,189.46
Shaffer Run Pipe company	Oil City	37,712.00
Sage Run Pipe line	Oil City	16,992.33
Smith's Ferry and Island Run Oil Trans. co.	Beaver county	10,433.13
Tidioute Oil Pipe company	Tidioute	30,216.45
Titusville Pipe company	Titusville	37,899.92
Taft & Payne Pipe company	Franklin	18,665.24
Union Pipe company	Parker	783,697.25
United Pipe lines		819,331.91
Vandergrift, Formon & Co.'s pipe line	Oil City	69,081.84
Total		3,202,057.61

* Refined.

BUSINESS OF PITTSBURG.

MANUFACTURING AND BUSINESS STATISTICS FOR 1874.

Reported for the Bureau of Statistics, by Wm. Evans and James T. Hudson.

The year 1874 has been a peculiarly unfavorably one to the leading interests which form Pittsburg's principal prosperity. The industries in iron, glass and oil, have all been subjected during the year to the severe tests of a heavy decline in values and a slack demand. These circumstances necessarily cause a falling off for many of the leading interests, but the decrease thus shown is not so great as might have been expected, and taking everything into account, present a very favorable showing for the stability and endurance of Pittsburg's chief industries.

The mercantile interests of Pittsburg have, of course, felt the depression of the manufacturing part of the community. But, nevertheless, the year has been an average one for the amount of business. A careful examination reveals the fact that in the amount of articles handled during the year, the business of the past twelve months, exceeds the average of former years by ten to fifteen per cent., while calculated in values it falls short of the average by from fifteen to twenty per cent. This is due partly to the greater economy rendered necessary by the exigencies of the times, and partly to the decline in values which has been so general during the year.

The task of collecting statistics has been a difficult one, and some information which would have been of importance we are forced to omit. It had been intended to include in the present report some statistics concerning the general tonnage movement of freight to and from Pittsburg, but this was rendered impossible by the apprehension of some railway officials, that by this means information might be made public which would be disadvantageous to their roads. Other gentlemen, connected with the railway interests of Pittsburg, furnished very liberally all the information asked for, and the statistics thus obtained, though incomplete, confirmed the opinion expressed elsewhere that the business of the year, calculated by tonnage, was increased considerably over any former year. The tonnage of eastern shipments for the year, as an example ,shows an increase of over fifty per cent., composed principally of the product of the iron, glass and oil manufacturies, while the market values of the same shipments would be a considerable decrease for the same period. We give below statistics of the iron, oil, coal and coke and produce business transacted in Pittsburg during the year ending December 12, 1874:

COAL AND COKE.

Notwithstanding the adverse circumstances of the coal and coke trade during the year, the statement of the amount handled presents a very good showing. Navigation was entirely suspended from June to November, and almost entirely stopped for two months previous. In addition to this, the disastrous waterspout, which destroyed so much life and property on the 26th of July, created considerable damage in the Saw Mill Run mining section, and to a certain extent caused a stoppage of operations there. Notwithstanding these drawbacks, we present below a statement of receipts showing a considerable increase in the total, aggregating 3,736,273 tons of coal, and 1,110,979 tons of coke, equal to 112,088,190 bushels of coal, and 66,658,740 bushels of coke. The receipts, last year, were 115,065,146 bushels of coal, and 34,230,500 of coke, making the aggregate receipts, for the present season, 178,646,930 bushels, against 149,295,646—an increase of 29,151,284 bushels. The shipments by river were 48,241,000 bushels, against 63,605,000 bushels the preceding year.

SHIPMENT OF COAL THROUGH THE MONONGAHELA NAVIGATION COMPANY'S LOCKS FROM ITS OPENING.

	Bushels.	Tolls.		Bushels.	Tolls.
1844	737,150	....	1860	37,947,732	$52,082 17
1845	4,605,185	$3,383 79	1861	20,865,722	30,945 92
1846	7,778,911	10,221 28	1862	18,583,956	26,709 29
1847	9,645,127	13,241 94	1863	26,444,252	40,532 08
1848	9,819,361	12,438 43	1864	35,070,917	61,384 29
1849	9,708,507	13,533 30	1865	39,522,792	69,608 48
1850	12,297,967	17,023 57	1866	42,615,300	77,811 26
1851	12,521,228	17,850 24	1867	30,072,700	54,855 63
1852	14,630,841	20,014 18	1868	45,301,000	91,376 38
1853	15,716,367	21,291 86	1869	52,512,600	104,936 61
1854	17,331,946	25,097 51	1870	57,596,400	118,705 68
1855	22,234,009	31,050 58	1871	48,621,300	100,338 64
1856	8,584,095	10,566 42	1872	54,208,800	115,609 20
1857	28,973,596	37,111 41	1873	56,173,238	116,728 75
1858	25,696,669	34,553 49	1874	58,934,800	....
1859	28,286,671	39,065 65			

COKE RECEIPTS PER SLACK WATER FOR THE PAST TWO YEARS.

	Pool No. 2, 1872 & 1873, bushels.	Pool No. 2, 1873 & 1874, bushels.
December, 1872	147,000	116,000
January, 1873	48,000	37,000
February	263,500	204,000
March	329,000	447,000
April	744,500	388,000
May	394,500	226,500
June	240,500	224,000
July	316,500	141,000
August	124,000	52,000
September	15,000	52,000
October	572,000	92,500
November	116,000	69,000
Total bushels	3,310,500	2,049,000
Total tons	55,175	34,150

COAL RECEIPTS ON THE MONONGAHELA FOR THE YEAR ENDING DECEMBER 1, 1874.

	Pool No. 1, bushels.	Pool No. 2, bushels.	Pool No. 3, bushels.	Pool No. 4, bushels.
December, 1873	694,000	1,023,000	801,100	741,300
January, 1874	1,601,000	4,746,000	1,396,000	1,605,700
February	1,423,500	4,549,500	1,682,700	1,596,500
March	1,400,000	5,150,000	1,860,000	1,485,600
April	1,517,500	4,968,400	1,864,800	1,635,900
May	696,000	3,099,800	1,028,000	802,900
June	83,000	934,000	335,500	342,600
July	39,000	715,500	239,100	561,300
August	47,000	366,000	481,100	399,700
September	21,500	209,500	125,500	753,200
October	123,500	479,500	822,200	....
November	753,500	2,615,500	894,400	1,223,500
Total bushels	8,399,500	28,856,700	11,530,400	10,148,200
Total tons	279,983	961,890	384,347	338,273

MONTHLY RIVER EXPORTS OF COAL SHIPPED BY THE OHIO RIVER, AND WHERE TO.

December, 1873.

	Bushels.
To Cincinnati	954,000
To Louisville	1,033,000
To Parkersburg	20,000
Total	2,007,000

January, 1874.

	Bushels.
To Cincinnati	3,830,000
To Madison	180,000
To Louisville	4,313,000
To Nashville	170,000
To Bayou Sara	95,000
To New Orleans	160,000
Total	8,748,000

February, 1874.

To Cincinnati	3,645,000
To Louisville	4,582,000
To St. Louis	531,000
Total	8,578,000

March, 1874.

To Cincinnati	2,547,000
To Louisville	5,350,000
To St. Louis	676,000
To Cairo	170,000
To Parkersburg	12,000
Total	8,555,000

April, 1874.

To Cincinnati	3,092,000
To Louisville	5,256,000
To St. Louis	75,000
To New Orleans	690,000
To Parkersburg	30,000
Total	9,143,000

May, 1874.

To Cincinnati	1,223,000
To Louisville	1,017,000
To St Louis	12,000
Total	2,252,000

July, 1874.

	Bushels.
To Ironton	80,000
To Cincinnati	740,000
To Louisville	150,000
To St. Louis	140,000
Total	1,110,000

November, 1873.

To Cincinnati	4,973,000
To Louisville	2,415,000
To Nashville	105,000
To New Orleans	355,000
Total	7,848,000
Total for year	48,241,000
Total tons	1,608,033

COAL RECEIPTS BY RAIL.

PENNSYLVANIA RAILROAD—RECEIPTS OF COAL AND COKE FOR PAST YEAR.

	Coal, No. cars.	Coal, tons.	Coke, No. cars.	Coke, tons.
December, 1873	2,595	31,650	2,507	30,084
January, 1874	2,850	34,205	3,138	37,656
February	2,786	33,432	2,549	30,588
March	2,836	34,032	4,105	49,260
April	3,181	38,172	3,641	43,692
May	3,548	42,576	3,312	39,774
June	3,973	47,676	3,390	40,680
July	3,616	43,398	3,214	38,568
August	4,588	55,026	3,805	45,660
September	5,214	62,568	3,938	47,256
October	4,960	59,520	4,322	51,864
November	3,202	38,424	3,593	43,119
Total	43,346	520,679	41,514	498,201

PITTSBURG AND CASTLE SHANNON RAILROAD, FOR PAST TWO YEARS.

	1872–73. Bushels.	1873–74. Bushels.		1872–73, Bushels.	1873–74. Bushels.
December, 1872	282,258	379,460	August, 1873	230,733	180,768
January, 1873	268,012	384,560	September	320,582	167,686
February	279,013	322,108	October	371,501	370,748
March	322,440	357,369	November	259,968	321,492
April	279,418	396,650			
May	238,482	396,894	Total bushels	3,378,000	3,825,714
June	184,497	329,016			
July	140,203	218,963	Total tons	112,600	127,523

RECAPITULATION.

COAL AND COKE RECEIPTS FOR 1874.

	Coal, tons.	Coke, tons.
Pennsylvania railroad	520,679	498,201
Pittsburg and Castle Shannon	127,000	
Pittsburg and Connellsville	401,876	578,628
Pittsburg, Cincinnati and St. Louis	206,224	
Allegheny Valley railroad	231,572	
Saw Mill Run	95,109	
Western Pennsylvania	189,320	
Monongahela River	1,964,493	34,150
Total	3,736,273	1,110,979
Equal in bushels to	112,088,190	66,658,740

PETROLEUM.

The relative position of Pittsburg to the petroleum producing sections is such as to make her the natural receiving, refining and distributing centre of the oil trade. The fact that heretofore the entire transportation of oil for Pittsburg has been controlled by a single railroad corporation, has resulted in giving other cities less favorably located decided advantages in the matter of transportation rates. The attention of capitalists has been drawn during the past year to this state of facts, and several steps have been taken to improve the position of Pittsburg in this respect. The opening of the Pittsburg and Connellsville railroad to oil shipments has given the refineries of our city a decided advantage in the transportation of their refined product to the seaboard, and during the few weeks that that route has been opened, a large amount of oil has gone forward. Other enterprises have been formed looking to the cheaper transportation of crude oil from the wells to this city, which, when consummated, will give Pittsburg such decided advantages as a refining centre as to place her far in advance of those competitors which have heretofore been most successful.

The unfavorable condition of the oil market during the past year will be seen, on reference to the table of prices current appended. During the early part of the year when prices were remunerative, the business transacted was largely in excess of any previous year. But when in June the downward course of the market resulted in establishing a lower range of prices than was ever before known, it resulted in a serious checking of the business, and caused a decrease in the receipts of crude oil, as compared with the previous year of over 400,000 barrels, as will be seen by reference to the figures given below. The eastward movement of crude oil, on the contrary, although seriously retarded by the disadvantageous circumstances alluded to, shows an increase of 65,328 barrels over that of 1873, which in its turn was more than 125,000 barrels greater than any previous year.

CRUDE OIL.

CRUDE OIL RECEIPTS AT PITTSBURG, BY RIVER AND RAIL, FROM 1859 TO 1874, INCLUSIVE.

	Barrels.		Barrels.
1859	7,063	1867	727,494
1860	17,161	1868	1,081,227
1861	94,102	1869	1,028,902
1862	171,774	1870	1,050,810
1863	175,181	1871	1,146,493
1864	208,744	1872	1,186,501
1865	630,246	1873	2,035,182
1866	1,263,326	1874	1,628,070

EXPORTS OF REFINED OIL EAST.

The following are the exports of refined oil east, for the past ten years:

	Barrels.		Barrels.
1865	298,111	1870	811,158
1866	424,848	1871	733,943
1867	498,221	1872	743,510
1868	724,991	1873	869,946
1869	596,475	1874	935,274

WEEKLY OIL PRICE CURRENT FOR CRUDE AND REFINED.

	Crude at Parker's.—Barrels.			Crude at wells. Barrels.			Refined oil at works.—Gallons.		
January 5, 1874	$1 10	@	$1 12	$ 70	@	$ 80	$ 11	@	$ 11¼
Do 12, 1874	1 15	@	1 30	75	@	85	11¼	@	11¾
Do 19, 1874	1 10	@	1 25	....			11¾		
Do 26, 1874	1 40	@	1 50	....			12		
February 2, 1874	1 50	@	1 60	1 20	@	1 25	12	@	12¼
Do 9, 1874	1 80	@	2 20	....			14	@	14⅛
Do 16, 1874	1 80	@	2 00	....			13¼	@	13½
Do 23, 1874	1 90	@	1 95	1 60	@	1 65	13	@	13½
March 2, 1874	1 80	@	1 90	1 55	@	1 60	13¼	@	13½
Do 9, 1874	1 62	@	1 70	....			12½	@	12¾
Do 16, 1874	1 75	@	1 80	1 40	@	1 44	12½		
Do 23, 1874	1 60	@	1 65	1 40	@	1 42½	12¼	@	12½
Do 30, 1874	1 80	@	1 85	....			12½		
April 6, 1874	1 95	@	2 00	1 60	@	1 62½	12½		
Do 13, 1874	1 82	@	1 87½	1 55			12¼	@	12½
Do 20, 1874	1 80	@	1 85	1 62	@	1 65	12¼	@	12½
Do 27, 1874	1 97½	@	2 05	1 65	@	1 70	12⅝	@	12¾
May 4, 1874	1 92	@	1 95	1 55	@	1 60	12½	@	13
Do 11, 1874	1 67½	@	1 70	1 47½			12½	@	12¾
Do 18, 1874	1 25	@	1 32½	1 00			12	@	12¼
Do 25, 1874	1 35	@	1 47	1 15	@	1 17½	11¾		
June 1, 1874	1 20	@	1 30	96¼	@	97½	11¼	@	11½
Do 8, 1874	1 02½	@	1 10	82½	@	85	11	@	11¼
Do 15, 1874	1 02½	@	1 05	77½	@	80	11	@	11¼
Do 22, 1874	1 07	@	1 10	85	@	87½	11		
Do 29, 1874	1 17	@	1·21	87½	@	90	11		
July 6, 1874	1 12	@	1 15	82½	@	85	11		
Do 13, 1874	1 02½	@	1 05	72½	@	75	10⅛	@	10⅜
Do 20, 1874	1 12½	@	1 15	82½	@	90	10¼		
Do 27, 1874	1 00	@	1 05	75	@	76¼	9¾	@	10
August 3, 1874	90	@	95	75	@	76¼	9¾	@	10
Do 10, 1874	1 05	@	1 07½	77½	@	80	10⅛	@	10¼
Do 17, 1874	1 00	@	1 05	75	@	77½	9¼	@	9½
Do 24, 1874	1 00	@	1 02½	75	@	82½	9	@	9¼
Do 31, 1874	1 10	@	1 12½	90	@	92	9¾	@	10
September 7, 1874	90	@	92	75	@	80	9½	@	9¾
Do 14, 1874	1 03¾			61¼	@	75	9½	@	9¾
Do 21, 1874	92½			72⅛	@	75	9¾	@	9⅞
Do 28, 1874	87½			70	@	72	9¾	@	10
October 5, 1874	1 05	@	1 06	75	@	76¼	9⅞	@	10⅛
Do 12, 1874	1 00			73¾	@	75	9¾	@	9⅞
Do 19, 1874	90	@	92½	70	@	71½	9¾	@	9⅞
Do 26, 1874	85	@	87½	60	@	61½	9½	@	9¾
November 2, 1874	67	@	68¾	42½	@	50	8⅞	@	9
Do 9, 1874	72½	@	75	42½	@	51	8¾	@	9
Do 16, 1874	72½	@	80	41½	@	48	8¾	@	9
Do 23, 1874	72	@	75	42½	@	50	8¾		
Do 30, 1874	75			51¼	@	53¾	8¾	@	8⅞
December 7, 1874	77½	@	81¼	55	@	56¼	8⅝	@	8¾
Do 14, 1874	80	@	83	60	@	61¼	9	@	9⅛
Do 21, 1874	85	@	87½	67½	@	71¼	9¼	@	9½

ROLLING MILLS.

The past year has been a very severe one to the iron manufacturing interests which form so large a share of the industries of Pittsburg. The effects of the panic of 1873 have been very severely felt throughout the entire year, causing a shrinkage of values of thirty per cent. in manufactured iron, and twenty per cent. in pig metal. The demand for manufactured iron is also largely decreased, and during the month of December the difficulties culminated in a wages dispute between the manufacturers and the boilers in their employ, which has resulted in the stoppage of the puddling department of every rolling mill in the city, with one exception. Under such circumstances the natural result would be a large decrease in the consumption of material and the production of manufactured iron, accompanied by a large proportion of failures. Such have been the results to a certain degree, but the statistics presented below, and the facts as to the failures of the past year, in this branch of trade, show a much smaller proportion of the results, usual to such a state of depression and shrinkage of values, than might have been expected. It is safe to say that the operations of the past year afford an extraordinary proof of the stability and strength of the iron interests of Pittsburg.

The statistics given below show the amount of pig iron, ore, blooms, and scrap iron received during the past year. The totals are as follows:

Pig iron, tons	268,415
Iron ore, tons	216,358
Blooms, tons	7,659
Scrap iron, tons	19,030
Total, 1874	511,462

This shows a falling off from the receipts of 1873 of 119,720 tons, of which decrease 104,484 tons were in the receipts of ore. The entire decrease from receipts of 1872 is 67,451 tons, while there is an aggregate increase over the receipts of 1871 of 69,255 tons, so that while the consumption of material in our mills and furnaces during 1874, was less than during the two years immediately preceding, it was considerably larger than during any year previous to 1872.

The number and capacity of the blast furnaces here has not been changed during the year, their aggregate annual capacity being placed at 166,400 tons. The actual product for the year will of course fall short of this amount through interruptions and the unfavorable state of the market.

The production of the rolling mills during the year will show a falling off in the number of tons of iron produced, which is much less than the prostrated condition of the iron trade would indicate. In fact, when we take into account the stoppage of some works through the financial embarrassments of their owners and the restriction of operations through wages, disputes and similar difficulties, it will be found that the production of the works that have been in operation is fully up to their average, estimated in tons. But when the aggregate value of the production is estimated the decrease is shown to be very large, and the unfavorable character of the year's operations is very apparent. The total production of manufactured iron in 1873 is estimated at 435,000 tons, that of 1874, at 370,000 tons, a decrease of 65,000. But the value of the manufactures of 1874 is estimated at $34,800,000, while that of 1873 is placed at $20,350,000, a decrease which is proportionately twice as great as that of the production measured by tons. The value of the raw material used in the rolling mills during 1874 is estimated at $14,068,440, and the amount paid for labor is calculated to be about $6,000,000.

We give below detailed statistics of the receipts of pig metal, ore, blooms, &c., for the year ending December 1, 1874:

PENNSYLVANIA RAILROAD PIG IRON AND BLOOM RECEIPTS.

	PIG IRON.		BLOOMS.	
	Cars.	Tons.	Cars.	Tons.
December, 1873	244	2,684	17	187
January, 1874	351	3,861	9	99
February	199	2,189	13	143
March	191	2,101	7	77
April	280	3,080	9	99
May	192	2,112	10	110
June	175	1,925	10	110
July	152	1,672	15	165
August	142	1,562	....	....
September	122	1,342	12	132
October	138	1,518	18	198
November	75	825	5	55
Total	2,261	24,871	125	1,375

PITTSBURG, FORT WAYNE AND CHICAGO RAILROAD.

	PIG IRON.	ORE.	BLOOMS.	SCRAP IRON.
	Tons.	Tons.	Tons.	Tons.
December, 1873	12,380	....	....	230
January, 1874	15,790	200	....	310
February	13,700	760	....	360
March	7,950	1,540	....	850
April	11,715	1,240	130	650
May	11,250	1,250	....	950
June	14,620	920	....	1,180
July	15,011	2,090	....	700
August	11,200	5,410	120	750
September	12,550	4,050	....	980
October	11,740	1,830	90	1,180
November	7,910	320	....	570
Total	145,816	20,010	340	8,710

CLEVELAND AND PITTSBURG RAILROAD AND MANCHESTER STATION.

	PIG IRON.	ORE.	BLOOMS.	SCRAP IRON.
	Tons.	Tons.	Tons.	Tons.
December, 1873	1,480	14,340	....	150
January, 1874	1,740	12,890	....	150
February	740	17,590	....	170
March	1,470	17,010	....	140
April	1,560	17,510	530	250
May	910	10,740	690	110
June	1,030	17,080	340	300
July	2,880	14,610	....	170
August	300	14,450	160	220
September	1,240	7,650	20	180
October	4,350	8,240	....	250
November	2,180	6,110	....	160
Total	19,880	158,220	1,720	2,250

ALLEGHENY VALLEY RAILROAD.

	PIG IRON.	ORE.	BLOOMS.	SCRAP IRON.
	Tons.	Tons.	Tons.	Tons.
December, 1873	1,400	....	160	120
January, 1874	2,530	200	....	....
February	1,960	80	120	....
March	1,650	....	20	650
April	1,050	....	30	270
May	1,190	....	....	150
June	2,060	60	610	230
July	1,790	80	530	240
August	1,640	60	270	220
September	1,660	130	180	150
October	1,250	....	900	90
November	850	170	630	410
Total	19,030	780	3,450	2,530

PITTSBURG AND CONNELLSVILLE RAILROAD.

	PIG IRON.		PIG IRON.
	Tons.		Tons.
December, 1873	1,770	July, 1874	2,000
January, 1874	1,380	August	1,220
February	870	September	1,690
March	600	October	1,810
April	930	November	1,070
May	1,760		
June	1,970	Total	16,670

WESTERN PENNSYLVANIA RAILROAD.

	PIG IRON.		PIG IRON.
	Tons.		Tons.
December, 1873	1,500	July, 1874	1,380
January, 1874	1,790	August	1,360
February	890	September	1,690
March	1,930	October	1,530
April	1,530	November	1,800
May	2,110		
June	1,380	Total	18,890

RECAPITULATION.

	PIG IRON.	BLOOMS.	ORE.	SCRAP IRON.
	Tons.	Tons.	Tons.	Tons.
Pennsylvania railroad	24,871	1,375	880	3,845
Pittsburg, Ft. Wayne and Chicago railroad,	145,816	340	20,010	8,710
Cleveland and Pittsburg railroad	19,880	1,720	158,220	2,250
Pittsburg and Connellsville railroad	16,670	....	....	....
Allegheny Valley railroad	19,000	3,450	780	2,530
Western Pennsylvania railroad	18,890	....	....	....
Pittsburg, Cincinnati and St. Louis railroad,	....	....	....	1,540
Total	245,127	6,885	179,890	18,875
By river	23,288	774	36,468	155
	268,415	7,659	216,358	19,030

GRAIN RECEIPTS.

The grain and produce trade of Pittsburg, during the past year, has had many difficulties with which to contend. The depressed condition of other industries has to a certain extent decreased the consumption of leading staples, and other causes such as discriminations in freight rates, &c., have operated to decrease the volume of trade in this line. Still there have been steps taken by which the interests of this department of business have been materially advanced. The organization of the Corn and Produce Exchange, which was accomplished in November, has been found to greatly facilitate the transaction of business, and by the union of the trade in one body, a strong influence has been brought to bear in favor of more equitable terms of transportation. By reference to the tables given below, it will be seen that the total amount of grain handled in Pittsburg during the twelve months ending December 1, 1874, was 3,558,170 bushels, while in 1873 the total amount was 4,572,208 bushels, a falling off of 1,014,038 bushels. The elevator receipts, by a similar comparison, show an increase of 90,875 bushels. The trade in flour has increased 63,408 bushels, and the amount of cheese handled shows an increase of nearly 20 per cent. over the previous year, while apples, butter and bacon show a slight falling off. The following tables give the receipts of the leading articles of breadstuffs and produce during the year ending December 1, 1874:

GRAIN RECEIPTS.

	Wheat. Bushels.	Barley. Bushels.	Rye. Bushels.	Oats. Bushels.	Corn. Bushels.
December, 1873	114,208	35,217	8,612	33,088	40,350
January, 1874	54,820	100,307	15,462	82,068	47,552
February	66,702	51,738	27,198	80,530	69,638
March	21,340	41,040	14,297	56,370	35,662
April	29,772	51,110	10,178	92,735	43,023
May	46,882	7,380	2,717	134,352	62,120
June	29,077	....	6,358	156,848	29,507
July	35,517	725	2,517	116,815	19,575
August	73,752	4,842	4,220	290,510	49,635
September	29,607	8,055	3,825	153,928	20,240
October	41,505	39,480	18,825	208,360	58,167
November	50,912	57,400	17,475	113,390	40,605
Total	594,094	397,294	131,684	1,518,994	516,104

PRODUCE RECEIPTS.

	Flour. Barrels.	Apples. Barrels.	Cheese. Boxes.	Butter. Packages	Bacon. Pieces.
December, 1873	34,896	5,616	4,253	684	97,362
January, 1874	36,165	4,655	673	790	59,998
February	37,632	3,672	723	1,035	62,261
March	38,747	3,078	344	1,511	30,592
April	44,860	4,096	1,732	1,162	20,021
May	35,077	2,249	4,325	832	31,044
June	35,137	222	5,383	634	12,958
July	33,330	701	5,348	606	32,409
August	43,363	2,211	4,887	661	22,089
September	31,988	1,023	1,852	737	7,098
October	43,364	4,276	7,617	805	17,337
November	46,254	14,124	16,124	1,080	11,073
Total	460,013	45,923	53,261	10,537	345,142

PITTSBURG GRAIN ELEVATOR RECEIPTS.

	Wheat. Bushels.	Barley. Bushels.	Rye. Bushels.	Oats. Bushels.	Corn. Bushels.
December, 1873	13,014	16,284	3,864	4,724	4,318
January, 1874	33,520	69,024	9,341	21,640	21,637
February	43,086	31,781	23,894	22,382	26,297
March	8,040	38,174	1,508	14,768	9,271
April	14,153	26,195	330	20,466	9,708
May	30,747	3,429	....	55,254	44,700
June	14,281	1,972	1,539	86,212	19,476
July	24,161	392	794	69,542	12,648
August	36,855	4,350	2,295	208,382	20,923
September	12,442	7,433	3,642	108,285	12,003
October	20,457	21,730	9,217	138,720	19,610
November	11,317	30,883	3,278	49,064	12,899
Total	263,053	251,647	59,502	839,441	213,490

STEAMBOAT TONNAGE.

The statistics of steamboat tonnage owned and operated by Pittsburg capital and in Pittsburg business, shows an increase over last year of five vessels and 1,573.30 tons. We give below a comparative statement of the number of vessels and their aggregate tonnage:

	1873.	1874.
Passenger boats	17	17
Ferry boats	9	10
Tow boats	117	121
Freight boats	3	3
	146	151
Total tonnage	32,962.61	34,535.91

APPROXIMATE ESTIMATE OF OTHER INDUSTRIES.

In addition to the above report of the leading manufacturing interests of Pittsburg I will here add what perhaps is only entitled to be considered as approximate estimates of the annual production of other interests less in amount, but which, in the aggregate, serve to give a better idea of the annual business of that city.

The glass manufacturers of Pittsburg are a sort of close corporation, and I have never been able to obtain from them any detailed report of the capital employed, or the annual product of their establishments.

The census report of 1870 puts down Allegheny county as having 32 glass establishments, capital invested, $460,800—producing, in 1869, $5,832,492.

The number of establishments is undoubtedly 12 or 15 below the true number, the capital involved is five times, or $2,300,000—the annual product is probably twice the amount of the census returns, or $11,600,000.

The manufacturers of steel are like the glass men, not disposed to enlighten the public in regard to their capital or annual products.

The census returns report Allegheny as having nine steel manufacturing establishments of all kinds. The capital involved reported at $2,095,400; the annual production of 1869 at $3,998,413.

This is also below the production of the past year. I suppose about $6,000,000 to be a fair estimate. The census returns give Allegheny county only one copper manufacturing establishment, capital invested, $250,000, and annual product, $276,000. There are at least two large rolling mills, I know not how many coppersmithing establishments. The annual product must probably reach $3,000,000.

MANUFACTURES.	Am'nt of capital invested.	Value of products.
Ale and beer	$2,000,000	$3,500,000
White lead	1,200,000	1,500,000
Tanneries	1,500,000	1,800,000
Tobacco factories	850,000	2,000,000
Cotton and woolen factories	1,500,000	1,800,000
Chair and cabinet factories	400,000	500,000
Brass founderies	400,000	500,000
Planing mills	500,000	700,000
Potteries	150,000	150,000
Brick yards	150,000	300,000
Turning shops	200,000	400,000
Carriage factories	350,000	350,000
Distilleries	300,000	2,500,000
Wagon factories	150,000	250,000
Brush factories	40,000	75,000
Marble yards	160,000	400,000
Bellows factories	30,000	60,000

BUSINESS OF ERIE

THE PORT OF ERIE.

The tabular statement of the business of this port, will be read with attention by every one interested in the growth of its foreign and domestic trade and the consequent increase of commercial activity in the city. There is no more flattering proof of the future importance of Erie as a transfer station on the great water and land grain transportation route from the prairies to the seacoast than these yearly exhibits of the fast increasing business done in the harbor by the various transportation companies which centre here.

The most important portions of the trade are, of course, the imports, foreign and coastwise. Of these the grain business assumes each year larger and larger proportions. In all the classes of grain there has been a large increase of business over the year 1873, and in all classes but one (oats) there has been an increase over 1872, and all previous years. Of barley there were imported during this year 3,868 bushels more than in 1873, and in round numbers, 66,000 bushels more than in 1872. 77,090 bushels of peas have been imported this year, almost all of which is a business of an entirely new growth. Corn shows an increase of 159,000 bushels over 1873 and 879,368 bushels over 1872. 243,446 bushels of oats have been received this year in excess of the receipts of 1873; but 353,000 bushels less than in 1872, which was a remarkable year in the transportation of this grain and shows an excess of 1,663 bushels received over the combined receipts of 1873 and 1874. It is, however, in the great bread staple of the world that the most flattering exhibit is made. Wheat is largely and steadily increasing from year to year, as the bulk of all its freight transactions. In 1874, 1,086,251 more bushels were brought into the harbor of Erie than during the year 1873, and 2,610,633 bushels more than in 1872; showing a grand increase over the total business of both 1872 and 1873 of 98,877 bushels. Of flour 295,647 barrels were received during the year, which represent 1,478,235 bushels of wheat, swelling the combined receipts of wheat and its products for the year to 5,076,242 bushels. There was an increase of 79,338 barrels of flour over the business of 1873, and of 116,884 barrels over that of 1872.

The increase in the receipts of breadstuffs shows to a remarkable degree the advantages which this port possesses for the ready transfer of freights and quick dispatch to tide water at Philadelphia. Of the imports which are to a great extent employed in home manufacturing industry, pig-iron alone shows an increase in the amount brought to the port, and that increase is merely nominal. This fact is of course fully accounted for by the depression in the iron industry and will be remedied at once on the revival of that business. The receipts of lumber, although a million and a half of feet less than that of the year 1873, was still eight and a half millions of feet greater than during the year 1872.

The present lack of facilities in railway communication with the coal fields prevents its increasing or even holding its own in the anthracite trade which goes in bulk to Buffalo, but still the docking facilities of its harbor continues to make the shipping of coal profitable. As a place of shipment for bituminous coal, it is hoped by the early opening of an additional road to the partly developed regions of Mercer and Lawrence counties, it may be able to regain its place beside Cleveland and Buffalo and even to lead them in this article of export. The entire falling off in its coal export, during this year of exceptionally hard times when many mines have been deserted and unworked, has been 108,000 tons—a fact which is not at all discouraging. In railroad iron business has increased in spite of the depression. 12,465 tons were exported in excess of the trade of 1873, and although the amount still falls short of the immense trade of 1872, it is a general increase over the figures of the last six years with that one exception.

Plaster is comparatively a new article of export and one which promises rapidly to increase. Nearly twenty-five hundred barrels were sent out in excess of the exports of 1873, and more than two thousand in excess of the trade of 1872.

Among other articles growing to be important as exports are its Lake Shore grapes. Nearly 10,000 baskets were shipped during the year, and the region is already prominently rivaling Ohio both as regards winemaking and the supplying of home and foreign markets.

The number of vessels entering the port fell off during the season about 300—showing 63,012 tons less than 1873—figures which indicate that the vessels plying to its channel are larger than the average and require a greater depth of water. The channel is naturally very favorable for large craft and requires comparatively little work to keep it in proper order, and the importance of its trade demands that the government should never neglect the outlay which will secure a thoroughly safe and commodious harbor. There is no other place on the lakes where appropriations are so uniformly productive of good results as in Presque Isle Bay. The present winter has already wrought some damages which need prompt attention and another spring should see the work of repairs persistently carried out. Half a million of dollars could be expended judiciously in and about the bay, and the River and Harbor Appropriation Committee can find no place on the entire line of sea and lake coast where that amount would do more good than at Erie

COMMERCE OF THE PORT OF ERIE.

Imports and exports for 1874, compared with previous years.

IMPORTS.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
Barley, bushels	52,822	188,091	359,767	268,391	140,750	202,559	206,435
Corn, bushels	517,684	637,497	301,785	554,228	621,113	1,341,418	1,500,481
Flour, barrels	117,759	156,328	167,610	229,119	178,763	213,309	295,647
Iron ore, tons	112,498	112,406	175,733	197,755	215,219	200,660	154,462
Lumber, feet	7,840,624	10,459,917	13,183,000	25,971,295	21,287,740	31,299,623	29,767,387
Oats, bushels	314,319	127,196	42,528	521,000	947,895	351,393	594,839
Peas, bushels						756	77,846
Pig iron, tons	3,575	5,153	1,372	4,955	2,667	1,532	2,163
Wheat, bushels	424,256	672,556	731,898	770,261	937,374	2,511,756	3,598,607
EXPORTS.							
Coal, tons	259,012	309,434	312,081	377,457	350,159	325,711	207,500
Grapes, baskets							9,901
Iron, railroad, tons	301	9,432	13,281	11,417	56,163	3,865	16,331
Iron pipe, pieces	10,606		20,470	7,791	8,411	21,073	16,492
Iron pipe, tons					1,737	55	106
Nails, kegs	3,061		30,107		23,748	4,424	15,442
Plaster, ground, barrels					833	1,104	2,856
Stoves	1,320	558	498	274	1,400	2,048	712
Sugar, barrels	7,688	15,273	20,610	41,101	58,823	39,944	11,416
Vessels entered and cleared, number	2,222	2,438	2,306	2,974	2,392	2,395	2,007
Tonnage of the same	740,894	878,600	899,892	1,398,771	1,277,704	1,160,017	1,097,005
Enrolled tonnage	11,893	12,793	13,837	20,681	16,779	25,934	25,146

PORT OF PHILADELPHIA.

The Bureau is indebted to the enterprise and liberality of Peter Wright & Sons, of Philadelphia, for the very full and elaborate report of the business of that city for 1874. Not only did they subject themselves to great labor in collecting and furnishing this exceedingly creditable report, but they generously refused all compensation therefor. We therefore tender them our own thanks and that of our readers for their gratuitous services.

STATEMENT OF TOTAL IMPORTS AND EXPORTS OF THE UNITED STATES,

Including gold and silver; with those of her five principal ports for fiscal years ending June 30, 1872, 1873, 1874, *compiled from statistics furnished by Mr. Edward Young, Chief of Bureau of Statistics, Washington, D. C.*

IMPORTS.

INTO.	Value for 1872.	Value for 1873.	Per centage of gain or loss of 1873 over 1872.	Value for 1874.	Per centage of gain or loss of 1874 over 1873.
United States	$640,338,766	$663,617,147	3.6 increase.	$595,861.248	11.3 decrease.
Philadelphia	20,383,853	25,393,150	24.5 "	26,447,037	4.15 increase
Boston	70,398,185	68,083,307	3.4 decrease.	52,212,405	30. decrease.
New Orleans	18,542,188	19,933,344	7.5 increase	14,533,864	37.1 "
New York	418,515,829	426,321,427	1.86 "	305,133,622	7.88 "
Baltimore	28,836,305	29,287,603	1.6 "	29,302,138	Stationary.
All other ports	83,662,406	94,598,316	13.7 "	78,232,182	20.9 decrease.

EXPORTS.

FROM.	Value for 1872.	Value for 1873.	Per centage of gain or loss of 1873 over 1872.	Value for 1874.	Per centage of gain or loss of 1874 over 1873.
United States	$571,989,467	$677,282,074	18.4 increase.	$716,819,392	5.85 increase
Philadelphia	21,016,759	24,239,357	15.3 "	33,121,337	36.6 "
Boston	23,199,668	29,392,645	26.6 "	30,610,650	4.14 "
New Orleans	90,802,849	104,898,732	15.5 "	93,715,710	11.93 decrease
New York	285,574,892	332,102,062	16.3 "	354,993,732	6.89 increase
Baltimore	18,459,533	19,421,723	5.2 "	27,692,709	42.58 "
All other ports	132,935,775	167,227,555	25.6 "	176,685,254	5.06 "

DOMESTIC EXPORTS.

Domestic export statement, by articles and countries, of commodities, the growth, produce and manufacture of the United States to foreign countries from the port of Philadelphia, during the year 1874:

ARTICLES AND COUNTRIES.	Quantity.	Value.
Austria:—		
Petroleum, (refined,) galls	1,145,852	$140,092
Belgium:—		
Bark		3,710
Bonedust, cwt	860	1,293
Bone black, ℔s	66,048	3,050
Bread and breadstuff:		
Bread and biscuit, ℔s	5,789	408
Indian corn, bushels	26,500	23,850
Rye, bushels	104,616	99,801
Wheat, bushels	602,486	864,844
Wheat flour, bbls	5,891	39,693
Cotton, ℔s	1,854,693	278,203
Drugs and chemicals		13,016
Furs		900
Hair, unmanufactured		14,692
Hides		205,250
Iron manufactures		15,194
Leather, ℔s	547,282	149,800
Nickel, ℔s	500	1,500
Petroleum, (refined,) galls	22,188,497	2,905,098
Naphtha and benzine, galls	133,561	8,685
Provisions		343,850
Starch, ℔s	3,000	3,780
Sweepings		3,000
Tallow, ℔s	2,260,206	181,295
Tobacco:		
Leaf, ℔s	4,586,364	454,716
Segars, M	74	5,660
Other manufactures		9,168
Wearing apparel		1,350
Wood:		
Boards, M	74	4,321
Manufactures		10,258
Miscellaneous		2,582
Total		5,648,487
Brazil:—		
Wheat flour, bbls	1,595	12,600
Boards, M	166	3,600
Miscellaneous		2,445
Total		18,645
Denmark:—		
Petroleum, (refined,) galls	1,709,428	229,672
Danish West Indies:—		
Coal, tons	246	1,230
France:—		
Bark		1,791
Indian corn, bushels	71,143	60,303
Rosin, bbls	504	1,502
Petroleum, (crude,) galls	1,608,454	145,439
Petroleum (refined,) galls	493,193	59,196
Naptha and benzine, galls	766,268	57,042
Tallow, ℔s	899,196	73,170
Cooperage		1,938
Total		400,381

Domestic Exports—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
French West Indies:—		
Wheat flour, bbls.	2,405	$16,141
Other breadstuffs		1,620
Petroleum, (refined,) galls.	9,820	2,070
Provisions		3,629
Tobacco leaf, lbs	9,690	924
Boards, M	50	1,000
Cooperage		1,505
Miscellaneous		366
Total		27,255
French Possessions in Africa:—		
Petroleum, (refined,) galls.	110,000	13,200
Germany:—		
Petroleum, (refined,) galls.	25,535,905	3,364,941
Benzine, galls	157,635	12,800
Miscellaneous		60
Total		3,777,801
England:—		
Agricultural implements		45,732
Bark		19,154
Books		2,273
Bread and breadstuffs:		
Bread and biscuits, lbs	12,688	2,040
Indian corn, bushels	606,915	521,166
Wheat, bushels	1,198,151	1,744,142
Wheat flour, barrels	52,219	357,399
Carriages		2,170
Copper ore, tons	20	1,500
Cotton, unmanufactured, lbs	12,443,423	1,889,778
Cotton manufactures		30,103
Dentists' material		31,598
Drugs		30,146
Dyestuffs		3,308
Fruits		14,601
Furs		3,980
Grease, lbs	97,091	7,713
Hair, unmanufactured		17,874
Hides,		427,265
Iron ropes		83,116
Leather and manufactures		162,183
Rosin, bbls	1,566	6,006
Oilcake, lbs	13,546,726	269,895
Oils:		
Petroleum, refined, galls	3,523,310	473,325
Naphtha, galls	135,926	11,214
Residuum, bbls	3,742	7,800
Paintings		1,120
Provisions		2,788,235
Rags, lbs	97,235	6,649
Seeds		6,956
Sewing machines		1,854
Spirits turpentine, galls	4,470	2,980
Molasses, galls	526,601	126,257
Sweepings		2,776
Tallow, lbs	5,187,086	448,331
Tobacco, leaf, lbs	4,778,694	503,146
Tobacco, manufactured		11,313
Wax, lbs	17,221	5,684
Wearing apparel		1,400
Wood—Boards, M	493	19,696
Wood manufactures		29,597
Miscellaneous		7,859
Total		10,131,334

DOMESTIC EXPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Ireland:—		
Indian corn, bushels	1,416,629	$1,231,277
Wheat, bushels	1,424,077	2,045,386
Wheat flour, bbls	6,354	45,135
Oilcake, ℔s	2,714,527	55,865
Petroleum, refined, galls	2,141,177	289,789
Naphtha, galls	430,681	36,872
Residuum, bbls	3,200	11,388
Seeds	....	708
Tallow, ℔s	302,500	23,000
Miscellaneous	....	5,648
Total	....	3,745,049
Gibraltar:—		
Rosin, bbls	1,020	2,565
Petroleum, refined, galls	1,954,531	259,269
Total	....	261,834
Nova Scotia:—		
Indian corn, bushels	17,170	15,170
Indian corn meal, bbls	675	2,880
Flour, bbls	1,222	7,680
Coal, tons	14,137	70,333
Iron manufactures	....	44,458
Provisions	....	1,065
Miscellaneous	....	848
Total	....	142,424
British West Indies:—		
Bread and biscuit, ℔s	746,782	29,973
Indian corn, bushels	43,260	38,833
Indian corn meal, bbls	25,441	109,240
Oats, bushels	29,156	20,129
Wheat flour, bbls	70,655	459,301
Candles, ℔s	18,240	2,745
Gold coin	....	1,800
Drugs	....	951
Iron manufactures	....	759
Matches	....	1,662
Oilcake, ℔s	2,035,129	47,117
Petroleum, refined, galls	111,944	19,457
Perfumery	....	4,174
Provisions	....	105,130
Soap, ℔s	72,036	5,100
Tallow, lbs	6,875	925
Tobacco, leaf, ℔s	457,792	60,368
Tobacco, manufactured	....	2,154
Wood, boards, M	107	3,113
Cooperage	....	21,844
Manufactures	....	3,899
Miscellaneous	....	7,934
Total	....	946,608
Italy:—		
Indian corn, bushels	15,105	12,087
Rosin, bbls	1,453	4,116
Petroleum, refined, galls	2,895,481	392,285
Spirits of turpentine, galls	9,690	5,620
Miscellaneous	....	66
Total	....	414,171
Mexico:—		
Coal, tons	3,640	16,860
Miscellaneous	....	1,185
Total	....	17,045

DOMESTIC EXPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Netherlands:—		
Petroleum, refined, galls	6,743,698	896,430
Petroleum, crude, galls	5,660	500
Total		896,930
Dutch West Indies:—		
Indian corn, bushels	1,650	1,670
Indian corn meal, bbls	860	3,440
Rye flour, bbls	258	$1,430
Wheat flour, bbls	2,727	17,175
Oilcake, ℔s	61,500	1,476
Provisions		2,993
Tobacco, leaf, ℔s	11,883	1,681
Boards, M	80	1,750
Miscellaneous		3,646
Total		35,256
Peru:—		
Iron, manufactures		771,147
Portugal:—		
Rye flour, bbls	300	1,350
Wheat, bushels	45,320	52,639
Wheat flour, bbls	1,018	6,110
Rosin, bbls	800	3,143
Petroleum, refined, galls	553,430	78,971
Cooperage		4,173
Miscellaneous		348
Total		146,734
Russia:—		
Iron—Locomotives	12	149,088
Petroleum, refined, galls	884,983	135,954
Total		284,042
Spain:—		
Petroleum, refined, galls	623,679	80,606
Naphtha, galls	18,881	1,794
Total		82,400
Cuba:—		
Agricultural implements		4,204
Bones, cwts	750	1,421
Boneblack, ℔s	506,889	21,349
Brooms		1,666
Indian corn, bushels	4,764	4,420
Wheat flour, bbls	3,752	27,943
Coal, tons	23,703	120,200
Drugs and chemicals		15,115
Gas fixtures		5,881
Glass		1,705
Gold coin		77,908
Hay, tons	139	3,185
Iron manufactures		141,968
Leather manufactures		2,399
Petroleum, refined, galls	5,945	1,221
Rice, ℔s	66,918	2,115
Paper		3,024
Perfumery		3,707
Provisions		44,398
Printing materials		4,494
Sewing machines		16,827
Tobacco, leaf, ℔s	5,570	1,048
Wood:		
Boards, M	1,581	38,876
Cooperage		816,724

DOMESTIC EXPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Cuba—Continued.		
Wood, manufactures	....	1,385
Wool manufactures	....	5,080
Miscellaneous	....	7,222
Total	....	1,375,485
Porto Rico:—		
Bread and biscuit, lbs	18,850	961
Indian corn meal, bbls	350	1,435
Flour, bbls	7,475	53,719
Candles, lbs	55,764	6,138
Iron manufactures	....	832
Petroleum, refined, galls	18,950	3,755
Paper	....	$1,585
Provisions	....	22,240
Soap, lbs	14,000	700
Wood:		
Boards, M	412	9,143
Cooperage	....	36,687
Miscellaneous	....	1,094
Total	....	138,389
Sweden and Norway:—		
Petroleum, refined, galls	149,555	19,326
Naphtha, galls	86,910	7,200
Total	....	26,526
United States of Colombia:—		
Gold and silver coin	....	4,000
Coal, tons	18,694	91,095
Provisions	....	680
Miscellaneous	....	155
Total	....	95,930
Venezuela:—		
Rye flour, bbls	407	2,147
Wheat, bushels	19,898	34,165
Wheat flour, bbls	27,443	187,452
Bronze manufactures	....	30,000
Candles, lbs	29,999	3,910
Coal, tons	485	2,386
Carriages	....	917
Cordage, lbs	86,850	10,525
Drugs and chemicals	....	26,690
Marble manufactures	....	9,170
Iron manufactures	....	51,712
Petroleum, refined, galls	10,249	1,854
Rosin, bbls	527	2,194
Cartridges	....	7,039
Provisions	....	60,433
Paper	....	1,000
Tallow, lbs	635,814	62,114
Tobacco, leaf, lbs	6,629	3,176
Wood—Boards, M	115	4,690
Manufactures	....	1,630
Miscellaneous	....	6,360
Total	....	509,564
Grand total	....	20,878,911

SUMMARY STATEMENT OF COMMODITIES,

The growth, produce and manufacture of the United States, exported to foreign countries from the port of Philadelphia during the year 1874:

ARTICLES.	Quantity.	Value.
Agricultural implements		$50,129
Animals		1,170
Bark for tanning		24,428
Beer and ale, gallons	1,917	860
Bones and bone dust, cwts	1,900	2,938
Bone-black, lbs	578,582	24,762
Books		5,116
Bread and breadstuffs:		
Bread and biscuits, lbs	815,140	34,644
Indian corn, bushels	2,203,588	1,910,943
Indian corn meal, bbls	27,403	117,731
Oats, bushels	30,671	21,220
Rye, bushels	104,616	99,801
Rye flour, bbls	965	$4,927
Wheat, bushels	3,289,532	4,740,796
Wheat flour, bbls	185,698	1,247,018
Other breadstuffs		991
Bronze manufactures		30,000
Brooms		1,792
Candles, ℔s	104,603	12,874
Carriages		3,327
Coal, tons	61,043	302,684
Copper ore, cwts	400	1,500
Cordage	90,769	10,879
Cotton bales, ℔s	14,298,118	2,107,981
Cotton manufactures		31,739
Dentists' materials		32,155
Drugs and chemicals		105,897
Fruits		16,326
Furs		4,480
Gas fixtures		6,369
Glassware		2,385
Gold and silver coin		85,708
Grease, lbs	113,481	9,199
Hair, unmanufactured		32,566
Hay, tons	184	4,336
Hides		656,647
Hops, ℔s	5,582	1,804
Iron:		
Bar, cwt	641	2,578
Castings		1,274
Car wheels	1,999	69,014
Engines		187,088
Machinery		811,479
Nails, lbs	355,100	14,934
Other manufactures		179,278
Leather and manufactures		315,568
Marble and stone		1,637
Matches		1,662
Naval stores—Rosin, bbls	6,011	20,551
Oilcake, ℔s	18,237,882	374,353
Oils:		
Petroleum, (crude,) gallons	1,614,116	145,939
Petroleum, (refined,) gallons	70,810,711	9,366,517
Naphtha and benzine, gallons	1,729,862	135,607
Residuum, bbls	6,952	19,213
Other oils		4,010
Cartridges		7,039
Paintings		1,245
Paper		6,384
Perfumery		7,424
Printing material		3,865

DOMESTIC EXPORTS—*Continued.*

ARTICLES.	Quantity.	Value.
Provisions:		
Bacon and hams, ℔s	8,370,405	779,130
Beef, ℔s	13,738,806	1,293,888
Butter, ℔s	454,616	49,464
Cheese, ℔s	1,990,159	203,336
Fish		14,679
Lard, ℔s	8,246,342	948,337
Meats		1,864
Pork, ℔s	928,247	81,308
Vegetables		24,611
Rags, lbs	97,235	6,649
Rice, ℔s	66,918	2,115
Seeds		7,911
Sewing machines		18,986
Soap, ℔s	90,151	6,067
Spirits of turpentine, gallons	14,266	8,663
Starch, lbs	64,550	$3,935
Sweepings		5,776
Molasses, gallons	526,601	126,257
Tallow, lbs	9,126,657	738,704
Tobacco:		
Leaf, ℔s	9,878,159	997,715
Segars, M	74	5,565
Snuff, lbs	3,600	1,476
Other manufactures		21,171
Wax, ℔s	17,467	5,700
Wearing apparel		2,800
Wood:		
Boards, M	3,039	86,148
Cooperage		886,897
Other manufactures		39,326
Miscellaneous		25,651
Total		29,878,911

RECAPITULATION.

Statement of the value of exports to the following foreign countries:

COUNTRIES.	In American vessels.	In foreign vessels.	Total.
Austria	$60,837	$79,255	$140,092
Belgium	614,144	5,030,623	5,648,867
Brazil	18,645	....	18,645
Denmark	....	229,672	229,672
Danish West Indies	1,230	....	1,230
France	106,072	294,309	400,381
French West Indies	27,255	....	27,255
French possessions in Africa	13,200	....	13,200
Germany	56,144	3,221,657	3,377,801
England	6,431,208	3,700,126	10,131,334
Ireland	72,522	3,672,527	3,745,049
Gibraltar	76,136	185,698	261,834
Nova Scotia	16,924	125,500	142,424
British West Indies	696,699	249,909	946,608
Italy	110,537	303,634	414,171
Mexico	17,045	....	17,045
Netherlands	59,016	837,914	896,930
Dutch West Indies	....	35,256	35,256
Peru	559,147	212,000	771,147
Portugal	11,461	135,273	146,734
Russia	200,909	84,133	285,042
Spain	11,863	70,537	82,400
Cuba	1,281,011	94,474	1,375,485
Porto Rico	50,855	87,434	138,289
Sweden	....	26,526	26,526
United States of Colombia	86,415	9,515	95,930
Venezuela	56,377	453,187	509,564
Total	10,635,652	19,243,259	29,878,911
Total exports during 1873	$7,382,905	$22,250,281	$29,633,186

STATEMENT OF THE EXPORTS OF BREADSTUFFS,

(including bread, biscuits, Indian corn, Indian corn meal, oats, rye, rye flour, wheat, wheat flour, and other grains,) and provisions, (including bacon, hams, beef, butter, cheese, fish, lard, meats, oysters, pork and vegetables) from the port of Philadelphia, to foreign countries, during the year 1874:

COUNTRIES.	Breadstuffs	Provisions.
Belgium	$1,028,596	$343,850
Brazil	13,070	....
France	60,303	....
French West Indies	17,761	3,629
England	2,624,807	2,788,235
Ireland	3,321,798	....
Nova Scotia	25,830	1,065
British West Indies	657,847	105,130
Italy	12,084	66
Dutch West Indies	24,444	2,993
Portugal	60,099	....
Cuba	33,465	44,398
Porto Rico	55,388	22,240
United States of Colombia	115	680
Venezuela	223,764	60,433
Total	8,159,371	3,372,719
Exports during the year 1873	$5,556,846	$1,137,832
Exports during the year 1872	4,100,979	282,954
Exports during the year 1871	4,148,595	341,382

EXPORTS OF PETROLEUM

from the port of Philadelphia to foreign countries during the year 1874:

COUNTRIES.	REFINED.		CRUDE.		NAPHTHA AND BENZINE.	
	Gallons.	Dollars.	Gallons.	Dollars	Gallons.	Dollars
Austria	1,145,852	140,092	....	....	....	....
Belgium	22,188,497	2,905,098	....	....	133,561	8,685
Denmark	1,709,428	229,672	....	....	....	....
France	493,193	59,196	1,608,456	145,439	766,268	57,042
French West Indies	9,820	2,070	....	....	....	....
French possess. in Africa,	110,000	13,200	....	....	....	....
Germany	25,536,905	3,364,941	....	....	157,635	12,800
England	3,523,310	473,325	....	....	135,926	11,214
Ireland	2,141,177	289,780	....	....	430,681	36,872
Gibraltar	1,954,531	259,260	....	....	....	....
Nova Scotia	84	15	....	....	....	....
British West Indies	111,944	19,457	....	....	....	....
Italy	2,895,481	392,285	....	....	....	....
Netherlands	6,743,698	896,430	5,660	500	....	....
Portugal	553,430	78,971	....	....	....	....
Russia	884,983	135,954	....	....	....	....
Spain	623,679	80,606	....	....	18,881	1,794
Cuba	5,946	1,222	....	....	....	....
Porto Rico	18,950	3,755	....	....	....	....
Sweden	149,555	19,326	....	....	86,910	7,200
Venezuela	10,249	1,854	....	....	....	....
Total	70,810,714	9,366,517	1,614,116	145,939	1,729,862	135,607

TOTAL EXPORTS OF PETROLEUM, BENZINE AND NAPHTHA.

	1874.		1873.		1872.		1871.	
	Gallons.	Dollars.	Gallons.	Dollars.	Gallons.	Dollars.	Gallons.	Dollars.
Refined	70,810,711	9,366,517	80,166,187	14,967,786	47,981,845	11,209,583	51,352,996	12,512,109
Crude	1,614,116	145,939	4,837,394	566,443	7,216,058	1,192,090	3,833,979	673,906
Naphtha and benzine	1,729,862	135,607	1,839,432	199,562	1,158,165	168,106	714,615	71,880
Total	74,154,689	9,648,063	86,843,013	15,733,791	56,356,068	12,569,779	55,901,590	13,257,895

AVERAGE PRICE.	Per gallon. 1874.	Per gallon. 1873.	Per gallon. 1872.	Per gallon. 1871.
Refined	13 225-1000c.	18 671-1000c.	23 560-1000c.	24 365-1000c.
Crude	9 042-1000c.	11 710-1000c.	16 526-1000c.	17 577-1000c.
Naphtha and benzine	7 840-1000c.	10 849-1000c.	4 511-1000c.	10 051-1000c.

CLEARANCES OF VESSELS.

Their nationality, value of cargo and tonnage :

NATIONALITY.	Number.	Tonnage.	Value of cargo.
American	443	267,029	$10,635,652
Austrian	12	5,724	288,772
Belgian	13	29,603	2,217,422
British	303	168,494	8,932,755
Danish	5	1,903	84,989
Dutch	6	1,890	105,916
French	1	493	39,000
German	111	72,353	2,871,283
Italian	52	24,903	1,413,813
Portuguese	8	2,123	105,583
Russian	17	9,751	473,989
Spanish	9	5,849	231,668
Swedish	125	57,820	2,481,129
Total	1,105	647,965	29,878,911

OUR FOREIGN COMMERCE FOR 1874.

The values of commodities imported into the Customs District of Philadelphia.

We are indebted to Seth I. Comly, Esq., Collector of the Port, for the following statement of the values of commodities imported into the customs district of Philadelphia for the year ending December 31, 1874 :

DIRECT TRADE.

Value of goods subject to duty	$20,862,112
Value of goods free of duty	3,570,368

INDIRECT TRADE.

Via New York, subject to duty	526,765
Via New York, free of duty	40,539
Received at other ports and warehoused at Philadelphia	306,741

Total value for 1874	$25,306,525
Total value for 1873	29,596,192
Total value for 1872	26,824,350
Total value for 1871	20,820,374
Total value for 1870	14,952,371

Decrease of 1874, as compared with 1873	4,298,667
Decrease of 1874, as compared with 1872	1,517,825
Increase of 1874 over 1871	4,486,151
Increase of 1874 over 1870	10,354,154

Of the total value per direct trade $24,432,480, for 1874; $15,120,548 were imported in American vessels, and $9,311,932 in foreign vessels, as against $11,396,694 in American vessels, and $15,424,202 in foreign vessels for 1873, showing an increase during the past year over 1873, in commodities imported in American bottoms, of $3,723,854, and a decrease in those imported in foreign bottoms of $6,112,270.

The bulk of the business is largely in favor of the *direct* trade, the decrease of the indirect trade via New York, as compared with 1873, being of itself $1,798,725. This result shows that our merchants are patronizing our own line of steamers more than heretofore and not relying so much upon New York.

The value of goods withdrawn from warehouse amounts to	$9,158,980 00
Withdrawn during 1873	7,151,746 00
Withdrawn during 1872	8,707,696 00

Statement of duties received during the year:

On imports in American vessels	$2,699,562 72
On imports in foreign vessels	1,475,217 92
On imports via New York	164,016 87
Merchandise withdrawn from warehouse:	
Imported in American vessels	2,320,119 25
Imported in foreign vessels	1,461,771 87
Re-warehouse withdrawals	137,675 26
Imported via New York	133,795 53
Total duties for 1874	8,392,159 42
Total duties for 1873	7,697,237 76
Increase in the amount of revenue over 1873	694,921 66

It may be stated here that ours is the only port in the Union exhibiting an increase in the amount of duties received the past year. The revenues collected at the other ports show a decided reduction.

The number of entries received and passed is as follows:

Cash	7,001
Free	1,111
Appraisement	481
Warehouse	1,284
Re-warehouse	174
Withdrawals from warehouse	6,090
Withdrawals from re-warehouse	613
Entries of additional duties	1,150
Entries of refunded duties	1,442
Total	19,346
Total number of entries for 1873	18,296
Increase in the number of entries	1,050

The total values of the exports for the past year are:

In American vessels	$10,635,652
In foreign vessels	19,243,259
Total	29,878,911
Total values of exports for 1873	29,633,186
Increase in exports	245,723

The total number of passengers arrived is	10,633
Arrived during 1873	4,257
Increase	6,376

As to the character of the goods imported, the statistics show that all descriptions of linens, silks, cottons, leather, woolens, and, in fact, all sorts of fancy goods have come to us in greater quantities than during bygone years, whilst the importations of pig iron, old wrought iron, old cast iron, and all manufactures of iron and steel, and all manufactures of steel and other metals have been very considerably diminished. On the whole, the year 1874 compared favorably with any of its forerunners. True, the values of goods imported, which is after all the only true guage by which to estimate the amount of business transacted, are not so large as was hoped, but our revenue has been increased, and to such an extent as to command the attention of the general government. Let us hope that the year 1875, in view of the approaching Centennial, may outstrip all its predecessors in the extent of its commerce, and inaugurate an era of prosperity to continue for years to come.

FOREIGN IMPORTS.

Statement of import entries of commodities brought from foreign countries in American and foreign vessels, into the customs district of Philadelphia, during the year 1874:

ARTICLES AND COUNTRIES.	Quantity.	Value.
Belgium:—Free of duty:		
Articles of the United States		$15,729
Bleaching powder, lbs	44,814	977
Chemicals		11,129
Coffee, lbs	40,980	9,261
Hides		5,360
Household effects		1,089
Ivory		2,456
Madder, lbs	22,924	1,550
Rags, lbs	46,897	1,993
Silk, raw, lbs	678	5,080
Miscellaneous		9,150
Total free of duty		63,074
Subject to duty:		
Books		7,395
Brass manufactures		2,091
Barley, bushels	64,169	62,690
Chemicals		7,886
Clay, tons	91	1,048
Clay pipes		3,922
Cotton, manufactures		29,783
Earthenware		2,310
Fancy goods		12,291
Flax, and manufactures		3,854
Furs		50,818
Glass, manufactures		133,774
Hops, lbs	2,776	786
Iron:		
Pig, lbs	8,448,427	202,001
Muskets		14,764
Steel		12,148
Cutlery		3,615
Other manufactures		24,607
Ore		2,108
Lead, lbs	2,861,126	140,523
Leather and manufactures		43,779
Metals		1,871
Musical instruments		1,750
Oils and paints		3,470
Paintings		32,697
Paper, manufactures		7,962
Potato, farina, lbs	679,128	24,086
Provisions		18,833
Seeds		3,373
Silk, manufactures		31,468
Spices, lbs	24,146	15,856
Starch syrup		2,177
Tobacco, manufactures		1,185
Spirits, gallons	24,048	26,280
Wine, gallons	115,160	88,060
Wood, manufactures		7,462
Wool, unmanufactured, lbs	30,896	3,222
Wool, manufactures		45,789
Zinc in sheets and blocks, lbs	110,196	8,283
Miscellaneous		6,698
Total		1,155,000

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Bolivia:—Free of duty:		
Soda, nitrate, lbs	1,595,460	$38,291
Brazil:—Free of duty:		
Coffee, lbs	485,700	99,905
Subject to duty:		
Sugar, lbs	4,789,743	192,346
Total		292,251
Danish West Indies:—Free of duty:		
Pewter, lbs	678	125
Subject to duty:		
Copper, lbs	2,622	408
Iron, old, tons	143	1,842
Lead, lbs	30,632	1,113
Molasses, gallons	25,726	5,802
Miscellaneous		13
Total		9,303
Greenland:—Free of duty:		
Kryolite		65,575
France:—Free of duty:		
Chalk		2,733
Household effects		2,600
Platina		4,246
Miscellaneous		268
Total free of duty		9,847
Subject to duty:		
Glass, manufactures		642
Iron, old, tons	493	14,460
Oil, olive, gallons	2,536	6,115
Spirits, gallons	77,744	33,566
Wine, gallons	180,792	71,223
Miscellaneous		440
Total		136,293
French West Indies:—Subject to duty:		
Sugar, hhds	630,101	22,733
Spirits, gallons	54	93
Total		22,826
French possessions in Africa:—Free of duty:		
Articles of the United States		232
Subject to duty:		
Iron ore		30,576
Total		30,808
Germany:—Free of duty:		
Articles of the United States		24,189
Chemicals		25,134
Dyewood, lbs	10,189	11,718
Plumbago		989
Paper material		101,822
Ratans		5,294
Miscellaneous		570
Total free of duty		169,716
Subject to duty:		
Books		920
Cement		1,696
Chemicals		21,668
Clay and clay pipes		14,557
Cotton manufactures		2,132
Earthen and stoneware		9,075

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Germany :—Subject to duty :		
Fancy goods		$35,955
Glass manufactures		11,260
Grape sugar, hhds	60,900	2,436
Iron :		
Old, tons	170	11,664
Bar, lbs	1,519,493	62,610
Manufactures		84,899
Lead, lbs	3,050,353	149,266
Marble		7,048
Musical instruments		14,507
Paper, manufactures		2,485
Wine, gallons	9,386	3,278
Wood, manufactures		5,457
Wool, manufactures		35,881
Miscellaneous		2,788
Total		694,598
England :—Free of duty:		
Anatomical preparations		1,341
Argols, lbs	756,737	93,782
Articles of the United States		24,786
Barks:		
Medicinal	679,932	260,332
Cork		2,598
Books		18,630
Chalk		12,779
Chemicals		299,491
Chloride of lime, lbs	6,636,952	150,406
Cochineal, lbs	127,077	71,245
Coffee, lbs	67,304	13,428
Dyewood, cwts	493	479
Fruits		32,970
Gums, lbs	351,765	42,035
Hair, unmanufactured		3,556
Hides		125,811
Indigo, lbs	36,461	28,360
Ivory		1,208
Oils		7,266
Paintings		3,388
Paper material, lbs	480,706	21,699
Platina		4,348
Ratans		1,859
Rottenstone		2,030
Seeds		2,710
Shells		23,866
Silk, raw, lbs	1,264	9,309
Soda, nitrate of, lbs	310,300	8,320
Tea, lbs	1,132	679
Tin, in bars, cwts	685	19,948
Vanilla beans, lbs	209	4,187
Wood, unmanufactured		4,263
Miscellaneous		9,352
Total free of duty		1,306,516
Subject to duty:		
Beer and ale, gallons	25,095	25,091
Blacking		3,286
Books		84,644
Brass manufactures		12,564
Barley, bushels	36,251	47,600
Bread stuffs, other		14,904
Buttons		15,706
Cement		7,960
Chalk		1,089
Chemicals		354,312

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
England:—Subject to duty:		
Clay and clay pipes		$23,625
Coal, bituminous, tons	2,066	7,019
Copper and manufactures		17,869
Cotton, manufactures		505,491
Earthen and stoneware		506,816
Fancy goods		42,687
Flax, manufactures		780,880
Fruits		189,408
Furs		18,279
Glass and glassware		56,331
Grape sugar, lbs	172,500	6,900
Gypsum, calcined		1,902
Hair and manufactures		45,607
Hemp, manufactures		622
Hops	3,477	2,422
India rubber, manufactures		10,770
Ink		9,807
Iron—Pig, lbs	2,655,076	57,422
Bar, lbs	46,866	2,243
Old, tons	221	11,978
Hardware		12,055
Anchor and chains, lbs	519,049	30,752
Machinery		56,876
Musket and sporting guns		33,254
Steel ingots		120,812
Cutlery		35,404
Files		34,436
Other manufactures		304,212
Jewelry		7,655
Jute, manufactures		39,913
Lead, lbs	1,137,966	55,385
Leather and manufactures		263,850
Marble		26,314
Metals		26,072
Musical instruments		10,096
Oil cloth		3,502
Oils		10,518
Opium, lbs	97,074	479,824
Paintings		41,153
Paints		23,108
Paper, manufactures		68,224
Perfumery		10,518
Precious stones		78,958
Provisions		22,028
Salt, lbs	72,771,439	227,263
Saltpetre, lbs	10,963	789
Seeds		17,824
Silk, manufactures		440,784
Soap, lbs	19,946	3,373
Soda—Bicarbonate, lbs	302,400	9,874
Carbonate, lbs	40,238,159	840,542
Caustic, lbs	5,999,372	249,860
Spices, lbs	175,890	52,584
Sponges		3,644
Tin, in plates, cwt	191,215	1,728,269
Tin, manufactured		3,943
Watches		58,321
Spirits, gallons	48,341	65,433
Wine, gallons	17,080	21,078
Wood, manufactures		20,381
Wool, unmanufactured, lbs	488,345	121,826
Wool, manufactures		2,331,466
Miscellaneous		1,473
Total		12,563,076

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Ireland:—Subject to duty:		
Iron, old, tons	290	$8,679
Nova Scotia:—Free of duty:		
Fish		20,794
Gypsum, tons	10,416	12,438
Wood		10,036
Total free of duty		43,268
Subject to duty:		
Barley, bushels	4,800	4,653
Marble		4,593
Plaster, calcined		19,691
Potatoes, bushels	30,643	12,545
Lumber		25,956
Miscellaneous		37
Total		110,743
British West Indies:—Free of duty.		
Dyewood, cwt	87,428	60,845
Fruits		9,482
Wood, manufactured		814
Miscellaneous		882
Total free of duty		72,023
Subject to duty:		
Copper, lbs	16,423	2,399
Fruits		2,362
Iron, (old,) tons	147	1,918
Provisions		8,154
Salt, lbs	16,109,854	14,262
Sugar, lbs	1,925,477	82,254
Molasses, gallons	154,836	33,104
Miscellaneous		426
Total		216,893
British Guiana:—Subject to duty:		
Sugar, lbs	535,047	28,619
Greece:—Subject to duty:		
Fruits		34,592
Hayti:—Free of duty:		
Dyewood, cwt	18,285	13,080
Italy:—Free of duty:		
Chemicals		3,378
Fruits		329,904
Household effects		1,327
Oil		3,787
Paintings		8,958
Paper material, lbs	4,684,013	180,635
Sulphur, tons	8,576	262,492
Miscellaneous		2,384
Total free of duty		792,865
Subject to duty:		
Chemicals		81,614
Fruits		12,075
Hemp raw, tons	46	11,653
Marble		83,813
Metals		1,393
Oil, olive, gallons	3,313	3,747
Paintings		35,542
Paints		2,215
Salt, lbs	5,017,932	3,662

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Italy:—Subject to duty:		
Soap, lbs.	118,392	$9,995
Wine, gallons	11,751	4,745
Wood, manufactures	....	1,049
Miscellaneous	....	1,568
Total	....	1,045,936
Netherlands:—Free of duty:		
Articles of the United States	....	8,787
Chemicals	....	1,527
Madder, lbs	19,698	1,328
Total free of duty	....	11,642
Subject to duty:		
Clay and clay pipes	....	2,033
Iron, pig, lbs.	1,115,704	30,228
Spirits, gallons	30,206	12,075
Wine, gallons	13,913	4,498
Zinc in blocks, lbs.	91,560	7,072
Miscellaneous	....	2,867
Total	....	70,425
Dutch West Indies:—Free of duty:		
Chemicals	....	906
Guano, tons	70	1,705
Miscellaneous	....	658
Total free of duty	....	3,249
Subject to duty:		
Salt, lbs	1,534,545	1,661
Miscellaneous	....	716
Total	....	5,626
Dutch East Indies;—Subject to duty:		
Sugar, lbs	1,682,039	70,477
Peru:—Free of duty:		
Soda, nitrate, lbs.	1,942,625	46,623
Portugal:—Free of duty:		
Corkwood	....	52,315
Miscellaneous	....	142
Total free of duty	....	52,457
Subject to duty:		
Iron, old, tons	59	2,401
Marble	....	912
Salt, lbs.	2,280,938	2,273
Wine, gallons	1,224	1,040
Miscellaneous	....	336
Total	....	59,419
Spain:—Subject to duty:		
Fruits	....	176,230
Oil, olive, gallons	9,867	6,946
Total	....	183,176
Cuba:—Free of duty:		
Animals	....	1,200
Fruits	....	41,666
Paper materials, lbs	183,663	4,936
Miscellaneous	....	3,308
Total free of duty	....	51,110
Subject to duty:		
Brass	....	9,678

FOREIGN IMPORTS—*Continued.*

ARTICLES AND COUNTRIES.	Quantity.	Value.
Cuba:—Subject to duty:		
Chemicals	....	$1,077
Copper, lbs	74,565	12,637
Fruits	....	19,874
Iron, old, tons	665	13,649
Metals	....	1,192
Sugar, lbs	75,202,396	3,440,193
Molasses, gallons	11,095,438	2,614,315
Melado, lbs	166,129	5,631
Tobacco:		
Leaf, lbs	24,857	11,531
Segars, lbs	26,109	103,649
Miscellaneous	....	605
Total	....	6,285,141
Porto Rico:—Subject to duty:		
Fruits	....	1,389
Sugar, lbs	8,923,475	385,256
Molasses, gallons	70,238	18,627
Total	....	405,272
Sweden:—Free of duty:		
Specimens—mineralogical	....	277
Subject to duty:		
Iron:		
Bar, lbs	907,497	18,627
Old, tons	445	27,509
Manufactures	....	96,454
Miscellaneous	....	412
Total	....	155,615
United States of Colombia:—Free of duty:		
Fruits	....	3,069
Venezuela:—Free of duty:		
Cocoa, lbs	82,990	5,921
Coffee, lbs	2,785,445	551,503
Cotton, lbs	204,068	27,651
Fruits	....	1,222
Hides	....	75,059
Gold coin	....	63,650
Indigo, lbs	3,332	2,040
Miscellaneous	....	495
Total free of duty	....	727,441
Subject to duty:		
Iron, old, tons	53	912
Molasses, gallons	3,368	1,139
Miscellaneous	....	1,382
Total	....	730,874
Grand total	....	24,437,480

SUMMARY STATEMENTS OF ARTICLES,

Imported direct from foreign countries into the port of Philadelphia, during the year 1874:

ARTICLES.	Quantity.	Value.
Commodities free of duty:		
Animals, living		$1,245
Argols, lbs	756,773	93,782
Articles of the United States		74,891
Bark:		
Medicinal, lbs	699,932	260,342
Cork		54,993
Books		18,601
Chalk		15,512
Chemicals and drugs		302,627
Chloride of lime, lbs	6,661,787	151,383
Cocoa, crude, lbs	82,990	5,921
Cochineal, lbs	126,476	71,247
Coffee, lbs	3,379,784	684,133
Cotton, raw, lbs	204,608	27,747
Dyewoods, cwt	116,375	86,122
Fish, fresh, lbs	619,205	20,794
Fruits		419,300
Gold and silver coin		63,754
Guano, tons	70	1,705
Gums, lbs	354,947	41,678
Gut strings		1,307
Gypsum, tons	10,416	12,438
Hair, unmanufactered		3,974
Hides		208,496
Household effects		5,617
Indigo, lbs	39,793	30,400
Ivory		3,714
Kryolite		66,576
Madder, lbs	42,622	2,878
Oils		11,053
Paintings		12,646
Platinum		8,594
Plumbago		1,037
Paper material		313,045
Ratans		7,153
Rottenstone		2,506
Seeds		4,013
Silk, raw, lbs	2,302	16,953
Shells		23,861
Soap stock		1,055
Soda, nitrate of, lbs	3,848,385	93,234
Sulphur, tons	8,576	262,692
Tin in bars, lbs	705	30,496
Vanilla beans		4,187
Wood, unmanufactured		15,465
Miscellaneous		1,245
Total free of duty		3,570 368
Commodities subject to duty:		
Blacking		3,286
Beer and ale, gallons	25,747	24,415
Books		93,789
Brass manufactures		22,752
Breadstuffs		130,022
Buttons		15,754
Cement		10,144
Carriages		1,732
Chalk		876
Chemicals and drugs		466,914
Clay, tons	3,430	34,713
Clay pipes		9,736

FOREIGN IMPORTS—*Continued.*

ARTICLES.	Quantity.	Value.
Commodities subject to duty:		
Coal, bituminous, tons	2,066	$7,019
Copper and manufactures		33,897
Cotton manufactures		900,206
Earthen and stoneware		514,001
Fancy goods		90,970
Fish		2,422
Flax and manufactures		787,867
Fruits		439,375
Furs		69,093
Glass and glassware		200,561
Grape sugar, ℔s	149,025	5,961
Hair, human and other		46,044
Hemp and manufactures		12,275
Hops, ℔s	6,253	3,238
India rubber manufactures		10,384
Ink		9,421
Iron:		
Ore		32,684
Pig, ℔s	12,119,267	289,651
Bar, ℔s	2,752,356	102,686
Old, tons	2,686	95,046
Hardware		12,055
Anchors and chains	522,808	31,062
Machinery		57,372
Muskets and rifles		48,020
Steel ingots		133,198
Cutlery		39,736
Files		34,446
Saws and files		2,981
Other manufactures		496,007
Jewelry		8,095
Jute, manufactures		39,913
Lead, lbs	7,294,267	347,035
Leather and manufactures		328,046
Marble and stone		137,958
Metals		30,637
Musical instruments		26,930
Oilcloth		3,502
Oils:		
Olive, gallons	16,602	18,011
Other		6,992
Opium, lbs	97,074	479,824
Paintings		94,288
Paints		28,110
Paper manufactures		79,168
Perfumery		11,267
Plaster, calcined		20,593
Potatoes, bushels	32,282	15,481
Potato farina, lbs	679,128	25,263
Precious stones		78,958
Provisions		30,317
Salt, lbs	91,709,046	249,139
Saltpetre, lbs	10,963	789
Seeds		21,125
Silk manufactures		472,398
Soap, lbs	132,062	12,991
Commodities subject to duty:		
Soda:		
Bicarbonate, lbs	302,400	9,874
Carbonate, lbs	40,238,159	840,542
Caustic, lbs	5,999,372	249,860
Spices, lbs	200,040	68,420
Sponges		3,644
Starch, syrup		2,197

FOREIGN IMPORTS—*Continued.*

ARTICLES	Quantity.	Value.
Commodities subject to duty:		
Sugar, brown, lbs	93,712,481	$4,223,177
Molasses, gallons	11,359,606	2,672,943
Melado, lbs	165,129	5,631
Tin:		
In plates, lbs	191,260	1,728,661
Manufactures		3,943
Tobacco:		
Leaf, lbs	24,657	11,531
Segars, lbs	26,114	103,662
Other manufactures		1,190
Vegetables		11,248
Watches		59,135
Spirits, gallons	179,604	138,069
Wine, gallons	349,303	194,115
Wood manufactures		60,366
Wool:		
Unmanufactured, lbs	519,241	125,048
Manufactures		2,377,373
Zinc in blocks, lbs	198,946	15,141
Miscellaneous		19,251
Total		24,437,480

Statement of foreign merchandise imported into the port of New York and transported thence without appraisement to the port of Philadelphia, under the provisions of the act of July 14, 1870, during the year 1874:

COMMODITIES FREE OF DUTY.

Articles.	Value.
Philosophical instruments	$1,072
Platinum	27,487
Miscellaneous	1,980
Total free	30,539

COMMODITIES SUBJECT TO DUTY.

Books	1,399
Brass manufactures	2,766
Barley	15,323
Buttons	20,768
Chemicals	9,341
Cotton manufactures	88,890
Earthen and stoneware	792
Fancy goods	17,236
Flax manufactures	9,145
Fruits	2,483
Furs	5,988
Glassware	5,247
India-rubber manufactures	2,205
Iron manufactures	9,040
Jewelry	2,450
Leather and manufactures	36,334
Metals	3,363
Musical instruments	2,907
Oils	3,054
Paintings	9,220
Paper manufactures	6,869
Silk manufactures	110,601
Segars	4,639
Watches	16,530
Wood manufactures	3,436
Wool, unmanufactured	20,937
Woool manufactures	122,365
Miscellaneous	3,321
Total	567,304

RECAPITULATION.

Statement of imports from the following foreign countries into the port of Philadelphia during the year 1874:

COUNTRIES.	In American vessels.	In foreign vessels.	Totals.
Belgium	$7,426	$1,147,774	$1,155,200
Bolivia	38,291		38,291
Brazil		292,251	292,251
Danish West Indies	9,303		9,303
Greenland		65,575	65,575
France	722	135,571	136,293
French West Indies	22,826		22,826
French possessions in Africa	2,961	27,847	30,808
Germany	16,215	633,383	649,598
England	9,074,002	3,488,074	12,563,076
Ireland		8,674	8,674
Nova Scotia	60,876	49,867	110,743
British West Indies	94,259	122,634	216,893
British Guiana		28,619	28,619
Greece		34,592	34,592
Hayti	13,080		13,080
Italy	427,370	618,566	1,045,936
Netherlands	454	69,971	70,425
Dutch West Indies	429	5,197	5,626
Dutch East Indies		70,477	70,477
Peru	46,623		46,623
Portugal	21,178	38,241	59,419
Spain	183,176		183,176
Cuba	4,862,758	1,422,383	6,285,141
Porto Rico	133,555	271,717	405,272
Sweden		155,615	155,615
United States of Colombia	3,069		3,069
Venezuela	106,975	623,829	730,874
Total	15,125,548	9,311,932	$24,437,480
Imported via New York			567,304
Total			25,004,784
Imported during the year 1873 direct	$11,396,694	$15,424,202	$26,820,896
Imported via New York			2,186,925
Total imported 1873			29,186,925

DUTIES RECEIVED.

Amount of duties received at the custom house of Philadelphia, from January 1 to December 31, 1874.

	ON IMPORTS.		ON MERCHANDISE WITHDRAWN FROM WAREHOUSE.		On goods transported in bond under act of July, 14, 1870	On goods transported in bond, under act of July 14, 1870, and withdrawn from warehouse ..	On goods transported from other districts	Total duties received 1874	Total duties received during the year 1873
	Imported in American vessels.	Imported in foreign vessels.	Imported in American vessels.	Imported in foreign vessels.					
January	$171,204 13	$99,732 16	$189,574 79	$128,838 63	$17,346 57	$32,701 52	$13,006 71	$652,404 51	$583,706 29
February	242,968 59	139,847 22	188.663 84	124,870 30	24,446 27	17,892 10	13,071 55	751,759 77	508,453 46
March	433,064 91	80,472 36	194,208 69	82,030 36	13,405 84	12,726 29	10,885 63	826,801 08	802,727 83
April	329,661 29	126,679 28	190,487 80	68,426 81	13,231 38	8.098 62	9,809 00	746,394 18	785,243 22
May	282,841 83	53,209 55	249,307 33	101,642 59	10,096 14	7,801 79	10,459 81	715,389 04	714,063 53
June	150,993 95	158,525 16	303,396 76	194,175 11	8,153 69	9,231,26	6,125 62	830,601 55	561,694 03
July	130,720 50	221,189 29	194,151 45	156,611 05	14.461 14	3,475 53	4,963 13	725,572 00	688,158 07
August	210,498 67	144,406 46	218,919 20	85,990 32	14,096 24	13,540 87	5,916 98	694,170 74	796,557 40
September	271,814 89	143,672 60	237,921 58	171,275 91	14,990 74	13,199 43	9,051 42	860.926 61	621,520 82
October	115,539 35	137,183 00	161,389 22	177,662 84	16,068 66	8,372 63	16,261 44	632,487 14	600,861 61
November	187,036 68	93,809 29	99,767 15	69,297 04	9,565 84	4,034 24	21,834 18	485,344 42	457,073 11
December	173,217 93	76,454 60	92,936 27	100,948 91	6,783 22	2,721 35	16,246 10	469,308 38	577,178 39
Totals	2,699,562 72	1,475,217 92	2,320,724 08	1,461,771 87	163,455 73	113,795 53	137,631 57	8,392,159 42	....
Amount of duties received during the year 1873.	1,769,148 03	2,224,964 85	1,189,950 85	1,220,178 91	600,871 32	547.656 34	144,467 46	....	7,697,237 76

NATIONALITY OF VESSELS

Entered into the port of Philadelphia during the year 1874.

	Number.	Tonnage.
American	409	245,099
Austrian	12	5,724
Belgian	13	29,603
British	302	167,393
Danish	7	2,311
Dutch	5	1,758
French	1	493
German	110	70,915
Italian	55	24,633
Portuguese	7	1,940
Russian	17	9,736
Spanish	9	5,849
Swedish	121	56,187
Total	1,008	621,641

ENTRANCES AND CLEARANCES OF VESSELS.

Statement of the vessels entered at and cleared from the port of Philadelphia in coastwise trade during the year 1874:

	ENTERED.		CLEARED.	
	No.	Tonnage.	No.	Tonnage.
January	77	45,578	98	59,980
February	79	42,064	87	54,651
March	123	53,396	121	61,436
April	164	63,285	144	67,601
May	132	59,137	157	79,248
June	160	70,979	165	76,147
July	149	68,686	149	71,073
August	128	56,388	152	72,345
September	132	57,374	136	66,460
October	129	52,547	161	75,558
November	125	46,114	133	60,797
December	130	52,998	140	67,113
Total	1,528	664,456	1,653	812,409

STATEMENT OF IMMIGRANTS

Arrived at the port of Philadelphia from foreign countries during the year 1874:

NATIONALITY.	Males.	Females.	Totals.
Africa	5	....	5
Austria	43	18	61
Hungary	14	10	24
Belgium	55	42	97
Brazil	2	....	2
Chili	1	....	1
China	2	....	2
Denmark	32	26	58
France	238	100	338
Germany	1,092	791	1,883
Great Britain and dependencies:			
England	1,178	1,034	2,212
Scotland	38	28	66
Ireland	1,102	1,049	2,151
Nova Scotia	1	....	1
British West Indies	8	4	12
Australia	1	....	1
Greece	1	....	1
Italy	177	44	221
Mexico	1	....	1
Netherlands	56	34	90
Portugal	1	....	1
Russia	499	440	939
Poland	54	26	80
Switzerland	176	130	306
Sweden and Norway	137	93	230
Spain	16	1	17
Cuba	42	24	66
Turkey	1	....	1
Venezuela	2	....	2
Total	4,975	3,894	8,869
Total number of immigrants in 1873	2,241	1,440	3,681

The detailed statement, which we publish of the imports for the year 1874, will bear close study. The most apparent and most important deduction to be drawn from their analysis is the gratifying fact that while the imports of the entire country have notably decreased during the year, the business of the port of Philadelphia has constantly grown greater. The amount received at the Philadelphia custom-house for duties during the year 1873 was $7,697,237 76, while in the year just closed the aggregate reached $8,392,159 42, showing in this item a gain of $694,921 66; an exhibit altogether satisfactory, when the utter stagnation of trade throughout the country is taken into consideration. We consider the indication a most hopeful one for our commercial future, and cannot doubt that with the revival of prosperity the ratio of increase here will be maintained to such an effect as will place Philadelphia among the foremost of American ports. In the matter of immigration, too, we find that with the press of the entire country teeming with lamentations about the "return current," the inducements and attractions of Philadelphia as a port of arrival have brought about an increase of 5,188 immigrants. No better argument can be advanced to prove the superiority of the Philadelphia steamship line than is given in this one fact, and it is but an earnest of what is to come when the arrangements for the control of this business become more nearly perfected.

Comparing the figures in some of the leading articles of traffic with those representing the results of the previous year, we find that an increase is registered in cotton, $691,169 ; in flax, $467,923 ; in leather and its products, $279,579 ; in opium, $226,156 ; in silks, $397,009 ; in tin plates, $168,502 ; in wine and spirits, $96,420 ; and in woolen manufactures, $1,463,178. The decrease is most noticeable as follows : In copper, $81,841 ; in iron and its manufactures, $2,617,142 ; in lead, $59,335 ; in metals, $31,028 ; in provisions, $80,611 ; in soda carbonate, $611,572 ; in sugar, $2,207,055 ; in molasses, $607,330, and in clay $37,101.—*N. A. and U. S. Gazette.*

THE COMMERCIAL ADVANTAGES OF PHILADELPHIA.

HER UNEQUALLED TERMINAL FACILITIES AND RAPID GROWTH OF TRADE.

At no time, perhaps, during the history of our State has its foreign commerce shown such a gratifying increase as during the past two years, and, thanks to native energy and enterprise, Philadelphia, as our gateway to the sea, once more ranks among the foremost of Atlantic ports. Pre-eminent, indeed, as Pennsylvania has long been as a manufacturing State, the establishment of direct communications between Philadelphia and Europe was apparently all that was requisite to revivify her foreign commerce, and to place her on that highway of commerce between the new and old worlds to which her geographical position and unequalled terminal facilities at Philadelphia justly entitled her, and that the result has not been disappointing, a glance at the following statement must both carry conviction with it and convey an assurance that the rapid progress already made is but the forerunner of greater activity in the future.

STATEMENT OF TOTAL IMPORTS AND EXPORTS OF THE UNITED STATES,

Including gold and silver, with those of her five principal ports for fiscal years ending June 30, 1872, 1873, 1874.

IMPORTS.

INTO	Value for 1872.	Value for 1873.	Per centage of gain or loss of 1873 over 1872.	Value for 1874.	Per centage of gain or loss of 1874 over 1873.
United States	$640,338,766	$663,617,147	3.6 increase	$595,861,248	11.3 decrease
Philadelphia	20,383,853	25,393,150	24.5 increase	26,447,037	4.15 increase
Boston	70,398,185	68,083,307	3.4 decrease	52,212,405	30.0 decrease
New Orleans	18,542,188	19,933,344	7.5 increase	14,533,864	37.1 decrease
New York	418,515,829	426,321,427	1.86 increase	395,133,622	7.88 decrease
Baltimore	28,836,305	29,287,603	1.6 increase	29,302,138	Stationary
All other ports	83,662,406	94,598,316	13.7 increase	78,232,182	20.9 decrease

EXPORTS.

FROM	Value for 1872.	Value for 1873.	Per centage of gain or loss of 1873 over 1872.	Value for 1874.	Per centage of gain or loss of 1874 over 1873.
United States	$571,989,467	$677,282,074	18.4 increase	$716,819,392	5.85 increase
Philadelphia	21,016,750	24,239,357	15.3 increase	33,121,337	36.6 increase
Boston	23,199,668	29,392,645	26.6 increase	30,610,650	4.14 increase
New Orleans	90,802,849	104,898,732	15.5 increase	93,715,710	11.93 decrease
New York	285,574,892	332,102,062	16.3 increase	354,993,732	6.89 increase
Batilmore	18,459,533	19,421,723	5.2 increase	27,692,709	42.58 increase
All other ports	132,935,775	167,227,555	25.6 increase	176,685,254	5.06 increase

IMPORTS.

Our imports, amounting in 1872 to $20,383,853, had increased to $25,393,150 in 1873, or at the rate of 24.5 per cent. per annum, and in 1874, notwithstanding the general stagnation of trade throughout the country, to $26,447,037, an increase of 4.15 per cent. over 1873, while, on the other hand, the total importations of the United States during the same period had suffered a decrease of over 11 per cent. Free, also, from her former dependence, on neighboring cities for steam communication across the Atlantic, Philadelphia now competes with them for the carrying trade of the west and south, and by the unequalled facilities she can offer for its conduct, even levies tribute from those to whom she was but yesterday tributary. Thus, in a period of little over two years, has our State not only rendered herself in a great degree quite independent of the foreign steamship lines of neighboring ports, but is enabled to offer important commercial centres like Pittsburg, Lancaster, Harrisburg, Chicago, St. Louis, Cincinnati, Savannah, Charleston, &c., a show in the substantial advantages which she herself enjoys, and, as may be seen from accompanying table, many of these cities have already availed themselves of the Philadelphia route for portion of their importations, which, it is well to note, generally consist of the more valuable kinds of merchandise.

IMPORTATIONS IN BOND VIA PHILADELPHIA.

The following is a report of merchandise received at the port of Philadelphia by the American and Red Star steamship lines, from January 1 to December 31, 1874, and sent in bond under the act of July 14, 1870, viz:

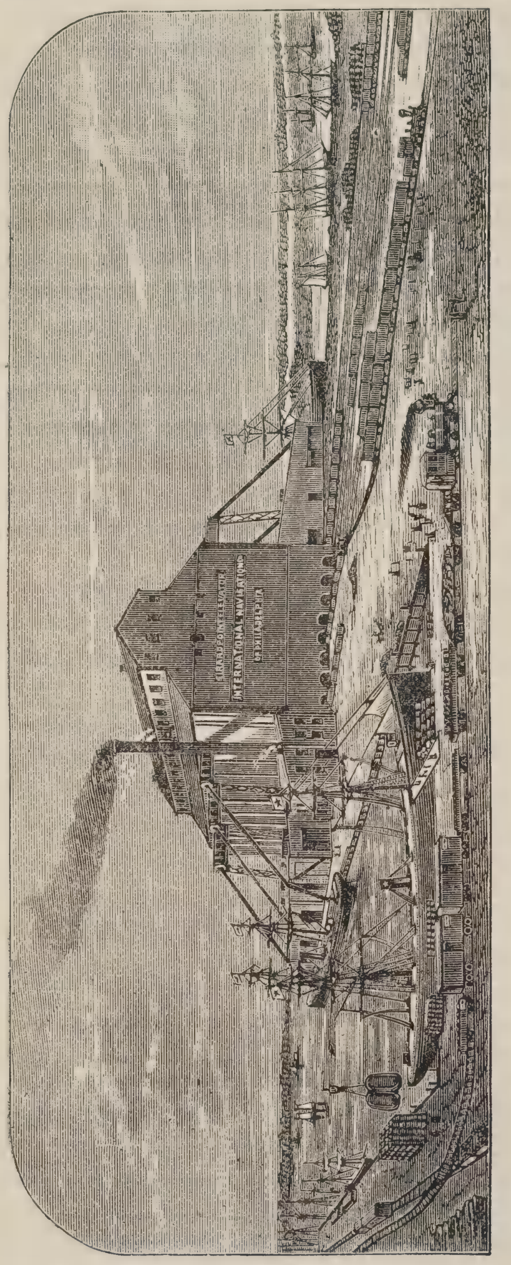
Chicago	4,668	packages.
New York	6,802	"
Baltimore	1,179	"
Cincinnati	229	"
Milwaukee	126	"
Pittsburg	61	"
St. Louis	11	"
Louisville	4	"
Total	13,080	"

EXPORTS.

In even a more marked degree have these advantages served to build up the exports of our State, and while the shipments from our port for 1873 show an increase in value of fifteen per cent. over those for 1872. The statistics of the past year give evidence of over thirty-six per cent. on 1873, and this at a time when all the principal staples of export had seriously declined in value. Connected, indeed as she is, with all parts of the United

States by such a vast net-work of railroads, the development of the foreign trade of Philadelphia, already fostered by her own steam-ship lines, can only be limited by the means at her disposal for the transportation of merchandise, and appreciating their necessity, such attractions have been offered to the managers and controllers of tonnage throughout the world, seeking business with the United States, as have now practically secured for Philadelphia a supply of tonnage commensurate with her wants. New elevators have been erected, with a capacity to load eight vessels at one time, free wharfage offered, the harbor improved, port charges reduced, and the advantages of the Delaware breakwater, as one of the finest port of call, brought prominently to the attention of the world. Large and manifold also as are the industries of our own State, the produce of the West and South, to no considerable extent, forms an important percentage of Pennsylvania's exports; and to our fellow-citizens in these quarters, Philadelphia furnishes a shipping point second to none in the country. Our trunk lines of railroads run their branches into their elevators, cotton presses, packing houses and through their grain fields, bringing merchandise from the spot, direct to Philadelphia without a change, by cars which run alongside the steamers or vessels already provided for its transport across the ocean. Speed in transit has also been studied, and with no idle boast, the Pennsylvania route from the West to Europe may now be called the shortest in existence.

GRAIN ELEVATORS OF THE INTERNATIONAL NAVIGATION COMPANY AT GIRARD POINT, PHILADELPHIA.



While upon the subject of exports, and especially those of grain, it may not be uninteresting to add a few remarks upon some recent improvements at Philadelphia, which are destined to play an important part in the future exports of grain through Pennsylvania.

Reference is made to the *grain elevators* of *the International navigation company* at *Girard Point,* Philadelphia. Situated, on the one hand, at the eastern terminus of the vast system of railroads penetrating *West, North-west* and *South-west,* and owned and controlled by the Pennsylvania railroad company ; on the other hand, at the junction of the Delaware and Schuylkill rivers ; and while sufficiently inland to afford a secure harbor, (with such depth of water that the *largest* vessels can load at the spacious wharves,) they afford facilities which form one of the most effective solutions of the problem of cheap transportation yet offered at any port on the Atlantic seaboard. The grain, loaded into cars at the most remote points, is brought *without any transhipment into* the elevators, through which it is passed *directly* to vessels. Having arrangements for loading twelve vessels *at one time*, the utmost dispatch is secured for tonnage, and the large storage capacity, (now 1,000,000 bushels, and to be increased to 4,000,000,) gives the western shippers the advantage of holding their property at tide water, in thoroughly fire proof ware-houses, until it is desired to ship, when vessels of any size are at his disposal, the low expenses of the port and the liberal policy of the company in giving free wharfage and other facilities, attracting vessels from all parts of the world.

When it is seen that the increase in grain shipments from Philadelphia in 1874 was 44¼ per cent. over those of 1873, *without the aid of these valuable improvements*, a further and yet *more important* progress may reasonably be anticipated during the present year, and a steady advance in the future.

The International Navigation Company own 98 acres of land at the junction of the Delaware and Schuylkill rivers, and the elevators, which are situated at this point, as above described, are only one of the many features in the improvements established here.

At each side and in front of the elevators are the largest wharves in the country, being each 500 feet long and 250 feet wide ; upon these wharves are built extensive ware-houses, into which run the tracks of the Pennsylvania railroad company, and where all goods arriving from the interior and intended for shipment to any part of Europe, or discharged from arriving steamers and sailing vessels and destined for the great cities of the West, are handled under cover. The goods are handled with the greatest ease, dispatch and economy, by means of powerful machinery on the docks and in the ware-houses.

The ware-houses are bonded, and goods arriving from a foreign port can be stored here till the importer desires to pay duty. Foreign goods destined for the interior can be examined and appraised in these ware-houses and shipped off without delay, avoiding the tedious and expensive examination at the custom-house, customary at other ports.

The docks are large and commodious ; a fleet of steamers can be afloat and discharge and load in them at all stages of the tide.

From the large amount of property owned by the company at this point, these docks, wharves and ware-houses are capable of large extension, sufficient to meet any demands, and additional improvements will be made as business requires them.

PETROLEUM.

BY PETER WRIGHT & SONS.

Notwithstanding the many adverse influences arising from an almost world wide commercial depression, the production and refining of crude petroleum still hold their position among the leading industries of our State ; and at the present moment it is estimated that over sixty nations of the globe now fill their lamps with Pennsylvania oil. The discovery of the article and its mode of manufacture were so fully dwelt upon in last report that in compiling that for 1874 a short synopsis of such facts and figures as more particularly relate to the production, refining and export of this staple has been deemed sufficient to give to the intelligent reader a comprehensive idea of the extent and value of a trade which furnishes to the world the cheapest illuminator of modern times, and one which is only found in paying quantities in the State of Pennsylvania.

PRODUCTION.

Although commencing the year with fair prices, the large production of the fourth sand wells, struck at the latter part of 1873, and the extensive stocks of crude in the regions, combine to prevent the usual active prosecution of new developments ; and it was not until the close of March, when the apparent small extent of the fourth sand belt induced considerable more activity, only, however, to be followed by a smart reaction, the increased production from these new third sand wells, the extension of the territory, and from further strikes on the fourth sand belt, (which was discovered to be of further extent than was at first supposed,) having a most depressing influence in the value of crude, bringing it down in fact to such a figure as to show nothing but a loss to the producer. The almost total cessation in drilling operations, which naturally resulted, has served in a measure to restore a better feeling, and prices for the end of December, 1874, closed at about the same figures as those current on the 1st of January, while the total production for the year is somewhat in excess of that of 1873.

NUMBER OF WELL DRILLING AT VARIOUS DATES.

MONTHS.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.
January 1	37	361	469	167	364	378	182	......
February 1	55	249	420	173	388	341	150	......
March 1	99	227	405	159	395	334	160	......
April 1	213	177	301	231	433	292	193	......
May 1	225	228	334	247	412	312	217	......
June 1	210	295	378	306	463	345	257	......
July 1	180	340	390	386	349	305	299	......
August 1	128	267	349	353	319	310	327	......
September 1	107	197	347	364	306	315	331	......
October 1	82	163	361	426	305	331	370	......
November 1	57	137	359	481	206	360	435	232
December 1	60	60	353	490	191	346	401	255

TABLE *showing the average daily production of crude petroleum in the Pennsylvania oil regions for each month, from September,* 1867, *until the close of* 1874.

	January	February	March	April	May	June	July	August	September	October	November	December	Total product for the year	Average daily product for the year
1867									9,700	9,600	9,800	10,400	100,000	
1868	8,700	9,200	8,621	8,537	8,790	10,102	10,693	11,981	11,033	10,137	10,271	9,730	3,583,176	9,811
1869	10,192	9,967	9,891	11,067	10,153	11,334	11,697	12,157	12,645	13,071	13,317	12,844	4,210,720	11,528
1870	12,634	11,917	12,385	12,974	14,165	14,817	16,969	17,777	19,489	20,158	18,012	15,214	5,673,195	15,543
1871	15,477	14,391	13,457	13,308	13,987	14,806	17,261	18,161	17,648	16,063	16,651	16,703	5,715,900	15,660
1872	16,286	17,012	15,506	16,308	18,345	17,749	18,513	18,816	16,561	14,309	23,275	22,054	6,531,675	17,895
1873	20,407	21,725	21,462	21,414	25,044	26,450	27,893	30,198	31,809	30,403	34,792	34,848	7,878,629	27,200
1874	35,000	33,500	32,000	30,500	30,639	33,238	33,966	32,059	30,231	32,689	29,370	27,920	11,589,115	31,751

Total approximate product of the Pennsylvania oil fields, from January 1, 1867, until December 31, 1874, 45,321,910 barrels.

Stock *of crude petroleum in the producing regions on the first of each month,* 1868 *to* 1874, *inclusive.*

	1874.	1873.	1872.	1871.	1870.	1869.	1868.
January........	1,948,919	1,085,435	623,348	507,751	340,000	264,000	534,000
February	2,283,032	1,183,630	692,282	587,021	342,000	274,000	541,000
March..........	2,528,210	1,266,375	866,548	642,944	351,000	282,000	552,000
April...........	2,623,534	1,244,655	1,040,898	673,810	385,000	329,000	559,000
May............	2,594,286	1,178,645	1,144,240	685,616	329,000	365,000	421,000
June	2,701,625	1,192,540	1,203,649	554,424	341,568	365,000	290,000
July	2,794,790	1,324,495	990,229	541,676	321,840	309,090	268,000
August.........	2,998,319	1,443,620	979,166	530,933	356,908	307,000	267,000
September	3,100,000	1,513,890	951,410	541,875	419,477	332,000	295,000
October.........	3,241,617	1,513,185	914,423	495,666	473,896	292,000	263,000
November......	3,700,000	1,452,895	759,630	503,574	576,014	275,000	266,000
December......	4,000,000	1,493,875	923,947	532,974	554,626	337,000	253,000

Table *showing monthly shipments of crude petroleum from producing regions during the year* 1874.

Total shipments for the month of January...........	705,961	barrels.
Do..............do........February..........	390,276	"
Do..............do........March.............	433,650	"
Do..............do........April..............	605,624	"
Do..............do........May...............	754,638	"
Do..............do........June...............	669,315	"
Do..............do........July...............	756,039	"
Do..............do........August............	648,180	"
Do..............do........September.........	837,226	"
Do..............do........October...........	566,378	"
Do..............do........November.........	498,218	"
Do..............do........December..........	508,891	"
	7,374,396	"

Daily average for the year, say 365 days, at 20,203 barrels, 7,374,396 barrels.

TABLE *showing price of refined petroleum at Philadelphia, from 1864 to 1874, inclusive, giving opening, highest, lowest and closing price of spot or prompt delivery for each month for the eleven years, 1864 to 1874, inclusive.*

MONTHS.	1864.				1865.				1866.			
	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest. .	Closing...	Opening..	Highest ..	Lowest...	Closing...
January	44	46	43	45	73	73	70	69	60	62½	50	51
February	45	46½	44	46	67	68	66	68	50	51	45	45
March	45½	50	46	50	65	65	53	53	43	43	37½	40
April	50	55	49	54	53	53	52	53	40	40	38	40
May	57	62	55	61	54	55	50	50	41	42½	41	42
June	63	71	63	71	50	53	50	53	42	42	39	39½
July	75	85	75	83	52	53	51½	52	39½	41	37	41
August	82	83½	82	83	51½	52	51	52	39	45	39	45
September	83	83	65	66	52½	62	52½	62	45	45½	42	42
October	61	65	60	65	64	64	58	58	42	42½	37½	37½
November	66	68	66	68	58	65	58	65	36½	37	33	33
December	68	78	68	73	67	68	65	67	32	32	28½	28½

MONTHS.	1867.				1868.				1869.			
	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest...	Closing...
January	28	29	27	27½	22½	23	22½	22¾	31¼	35½	31¼	35½
February	29	29	27¼	27½	22	23½	22	23½	36¼	38¼	36¼	36¼
March	27¼	27½	25½	26	23	25	23	25	34	34	30	30
April	26	27¼	25½	26¼	25	27	25	27	31¼	32¼	31¼	31¾
May	26	27	24½	24½	30	31	28	28	32½	32½	30½	30½
June	24½	25	21½	24	27¾	30½	27¾	29½	29½	32	29½	31½
July	24	34	30	33	31½	34½	31½	33¾	32	32	31	31⅜
August	32	32	26½	28	34½	34½	30½	30½	31¼	32¼	31¼	31¼
September	29	35	29	35	30¼	31½	28½	30½	31¾	32½	30¾	30¾
October	35½	36	31	31	30½	30½	29	29¾	31½	36¾	31½	36¾
November	30½	30½	23½	23	28	31½	25	31½	36½	36¾	30½	30½
December	23½	24½	21½	21½	29¼	31½	29¼	30¼	31½	32⅞	29¾	31

TABLE SHOWING PRICE OF REFINED PETROLEUM AT PHILADELPHIA—*Continued.*

MONTHS.	1870.				1871.				1872.			
	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest...	Closing...
January	30½	30½	20¼	20¼	22¼	26½	22¼	25½	22¼	22¾	22	22
February	30	30¼	27½	27½	25¼	25¼	24¾	24¾	22	22	21½	21¾
March	27½	27½	25¼	25¼	24⅝	24⅝	22¾	22¾	21⅞	21⅞	21¼	21¼
April	25½	26	25½	26	23½	23½	22⅝	22⅝	21½	22¼	21	22¼
May	27	28¼	26¾	27	22⅞	25¼	22⅞	25¼	23	23⅜	23	23
June	26¾	28	26½	28	25¾	26⅜	25⅜	25⅜	23¼	23¼	22¼	22¼
July	27⅜	27½	24¾	25	25⅝	26	24⅞	24⅞	22¼	22¼	22	22
August	24	26	23¾	26	24½	24½	24	24	22	22⅜	21½	21¾
September	25½	26¼	25½	26¼	24¼	24¼	23⅝	24⅛	23⅝	23¾	23⅝	23¾
October	25¼	25¼	23¾	23¾	24⅛	24½	24	24	25⅜	26⅜	25⅜	26⅜
November	23	23¾	22¾	23	23½	23½	21	21	26¼	27	26⅛	27
December	23	23	22¼	22¼	22½	22½	22	22	27	27	27	27

MONTHS.	1873.				1874.			
	Opening..	Highest ..	Lowest...	Closing...	Opening..	Highest ..	Lowest...	Closing...
January	27	27	20½	20½	13⅛	14	13⅛	13⅞
February	19	19	19	19	15	15	14⅝	14⅝
March	18¼	19⅛	18⅛	19⅛	14⅝	14¾	14½	14¾
April	19¼	19½	19¼	19½	15½	15⅞	15½	15⅞
May	20	20	19¼	19½	16	16	13⅛	13⅛
June	19½	19½	18⅝	18⅝	13	13	12¼	13
July	18⅜	18⅜	18	18	12¾	12¾	11⅞	11⅞
August	17⅝	17⅝	16	16⅛	12	12	11⅛	12
September	16	16¼	15⅞	16¼	12	12	11½	11⅞
October	16	16¼	15⅞	16	12¾	12¾	11¼	11¼
November	15½	15½	13	13	10⅞	10⅞	10¼	10¾
December	13	13¼	13⅛	13⅛	10¾	11⅞	11¼	11⅞

TABLE *showing number of Vessels, with Rig and Nationality, loaded at Philadelphia with Petroleum during the years of* 1870, 1871, 1872, 1873 *and* 1874.

RIG.	American....	Austrian	Belgian	British	Danish	Dutch.......	French......	German	Holland	Italian	Norwegian ..	Nicaragua..	Portuguese ..	Russian	Spanish	Swedish.....
1870.																
Ships..........	20	......	......	25	......	......	......	3	......	......	2	......	......	......	......	......
Barks	43	......	1	96	4	1	1	25	......	4	36	......	3	......	2	2
Brigs	21	1	......	24	1	2	......	3	......	5	5	......	1	......	......	......
Bkt'ns.........	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Schooners	1	......	......	2	......	......	......	......	......	......	......	......	......	......	......	......
	85	1	1	147	5	3	1	31	......	9	43	......	4	......	2	2
1871.																
Ships..........	18	......	......	25	......	......	......	13	......	......	3	......	......	......	1	1
Barks	41	......	......	89	3	1	......	38	......	7	38	1	3	1	2	9
Brigs	19	......	......	13	1	......	......	3	......	2	4	......	2	2	1	......
Bkt'ns.........	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Schooners	3	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......
	81	......	......	127	4	1	......	54	......	9	45	1	5	3	5	10
1872.																
Ships..........	19	......	......	25	......	......	1	12	......	......	2	......	......	......	1	1
Barks	29	2	......	91	......	4	1	36	......	5	38	......	6	4	......	4
Brigs	9	......	......	14	2	1	......	5	......	4	7	......	4	......	......	2
Bkt'ns.........	1	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......
Schooners	1	......	......	......	......	1	......	......	......	......	......	......	......	......	1	......
	59	2	......	131	2	6	2	53	......	9	47	......	10	4	2	7
1873.																
Ships..........	19	......	......	37	......	......	......	17	......	......	10	......	......	1	......	1
Barks	35	2	......	112	......	3	......	94	......	18	66	......	2	8	......	7
Brigs	19	......	......	14	1	1	......	9	......	10	4	......	3	3	2	3
Bkt'ns.........	1	......	......	1	1	......	......	......	......	......	......	......	......	1	......	3
Schooners	3	......	......	2	......	......	......	......	......	......	......	......	......	......	......	......
	77	2	......	166	2	4	......	120	......	28	80	......	5	13	2	14
1874.																
Ships..........	14	......	1	34	......	......	......	31	......	......	7	......	......	......	......	1
Barks	23	1	......	68	4	......	......	72	1	16	56	......	2	6	3	18
Brigs	8	......	......	8	2	......	......	1	......	7	9	......	5	1	1	2
Bkt'ns.........	2	......	......	6	......	......	......	......	......	......	......	......	......	......	......	......
Schooners	4	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......
	51	1	1	116	6	......	......	104	1	23	73	......	7	7	4	23

Total number of vessels loaded at Philadelphia with petroleum in 1870......... 334, carrying 1,100.851 barrels.
Do..................do..............do............do.............. 1871......... 345, " 1.238,061 "
Do..................do..............do............do..............1872......... 334, " 1,314.439 "
Do..................do..............do............do..............1873......... 513, " 1.889,146 "
Do..................do..............do............do..............1874......... 417, " 1,652,601 "

REFINING CAPACITY.

Although the condition of the trade has hardly warranted much increase to the refining capacity of the country, a good deal has been done in the way of improving machinery, repairs, &c., many of the manufacturers taking advantage of the prevailing dullness to completely close their works, for the sake of more thoroughly making such necessary renovations. It is also worthy of note that the economical arrangements which years of experience have gradually introduced into the manufacture of the article have tended more than ever to make it a national industry, and the time seems not far distant when the refining of petroleum will be as exclusively ours as its production. At the present time it is estimated that the refineries now constructed in the United States have a capacity to refine 40,000 barrels crude per day, divided as follows:

	Per ct.		Barrels.
STATE OF PENNSYLVANIA.			
Philadelphia	16	or	6,400
Pittsburg	22	or	8,800
Oil regions	18	or	7,200
	56	or	22,400
STATE OF NEW YORK.			
New York	25	or	10,000
STATE OF OHIO.			
Cleveland	19	or	7,600
	100	or	40,000

EXPORTS.

Although the shipments of 1873 were somewhat in excess of what has generally been considered a normal increase in the foreign consumption, the amount of petroleum and its products which left the country during 1874 has been little short of the figures for the previous year. In view, however, of the general dullness of trade, the decrease is indeed wonderfully small, and the stocks now held in Europe would show that the increase in consumption within the past two years has been at a greater ratio than at any time since the discovery of the article. In the far east, too, new markets are opening up, and the wants of the teeming millions of India, China and Japan may soon demand a production far ahead of what it is at the present day.

THE INTERNATIONAL EXHIBITION.

The great importance of this exhibition, not only to the interests of Philadelphia but to those of the State, render it eminently proper that some allusion should be made to it in these pages. The result of all former exhibitions of a similar character has been to largely increase business, open up new avenues of trade and to bring new inventions before the world. It was estimated at the close of the year 1867, that over $50,000,000 has been expended in the city of Paris, *beyond* the annual expenditures in that city. The interest already shown in Europe indicates not only that we shall have large exhibits from the various nations, but that from 20 to 30,000 visitors may be expected. These visitors will be composed of various classes, many of them capitalists, who will take this opportunity to make a thorough examination of our land with the object of making permanent investments, and the important coal and iron interests of this State will doubtless receive marked attention. Still further, there can be no question, but by the results of this exhibition, showing for the first time the progress of the nation at one glance, the tide of emigration will be largely increased and by a better class of emigrants then have heretofore reached our shores. As to our own people, information has been received from all sections that the number of visitors will be immense, various estimates have been made but the general opinion is that during the period at which the International Exhibition will remain open not less than ten millions of Americans will enter its portals. When we consider that there are within a radius of 250 miles of Philadelphia a population of over 12,000,000, this estimate does not appear unreasonable, a large number of these visitors will take advantage of the opportunity to visit all sections of the State and it is to be hoped that the greatest facilities will be offered by our numerous railroads in 1876, and at reasonable rates, thus increasing their own income and making the Keystone State better known to our own people.

To Philadelphia this opportunity is an unrivaled one, and its citizens proud of the position bestowed upon them by a National Congress, are using every effort to have their city in good condition for the great event. Every facility will be given to strangers. Hotels are now being erected, streets improved, supplies of both water and gas increased, new street railroads built, and the ornamentations of the city and Fairmount Park will be largely improved. Philadelphia to-day, the largest manufacturing city in the world, bids fair, under the impetus given by this great world congregating, to take a stand as a large commercial city. The American and Red Star steamship company, which has steadily gained ground since its origin, will find use in 1876 for all its material; it has been estimated that two-thirds of our foreign visitors will come by this line, and naturally a large proportion of the freight for the exhibition will be carried on their steamers. There can be no question, but this will tend to increase foreign trade hereafter and make Philadelphia a prominent commercial port. We shall now give such facts as we have been able to obtain as to the origin, present position and future prospects of the international exhibition which we have had illustrated by a map and designs of the buildings.

ORIGIN.

In 1871 various memorials and petitions were presented to Congress relative to the proper celebration of our Centennial anniversary in 1876. That body, after due deliberation, decided that the movement was a proper one, and in the preamble to the law making provisions for a fitting celebration, did commend the same to the people in the following felicitious terms, to wit :—

"WHEREAS, The Declaration of Independence of the United States of America was prepared, signed and promulgated in the year of 1776, in the city of Philadelphia :

"*And whereas,* It behooves the people of the United States to celebrate by appropriate ceremonies the Centennial anniversary of this memorable and decisive event, which constituted the 4th day of July, Anno Domini 1776, the birth-day of the nation :

"*And whereas,* It is deemed fitting that the completion of the first century of our national existence shall be commemorated by an exhibition of the national resources of the country and their development, and of the progress in those arts which benefit mankind, in comparison with those of other nations :

"*And whereas,* No place is so appropriate for such an exhibition as the city in which occurred the event it is designed to commemorate :

"*And whereas,* As the exhibition should be a national celebration in which the people of the whole country should participate, it should have the sanction of the Congress of the United States."

The letter and spirit of the law following this preamble shows that Congress intended that the celebration should be broadly national in its character, for it intrusted the management to commissioners to be chosen from the several States and Territories, and provided that the leading feature of the ceremonies should be a national and international exhibition of arts, manufactures and the products of the soil and mine, "to be conducted under the auspices of the government of the United States."

The Commission to direct the celebration and exhibition was constituted accordingly in the summer of 1871. But it was soon discovered that that body was wanting in authority to raise the necessary capital for the erection of buildings and other proper preparations. To supply this need Congress, in 1872, created another corporation known as the Centennial Board of Finance clothed with the right to raise capital, not exceeding $10,000,000, by selling its own capital stock, in shares of $10 each, accompanied with the right to one vote for each share in the election of directors. "The proceeds of said stock, together with the receipts from all other sources, shall be used by said corporation for the erection of suitable buildings, with their appropriate fixtures and appurtenances, and for all other expenditures required in carrying out the objects of the said act of Congress of March 3, 1871, and which may be incident thereto." And the tenth section reads as follows, to wit :—"That as soon as practicable after the exhibition shall have been closed it shall be the duty of said corporation to convert its property into cash, and after the payment of all its liabilities, to divide its remaining assets among its stockholders *pro rata*, in full satisfaction and discharge of its capital stock."

On the 4th of July, 1873, the proper authorities of the city of Philadelphia, in the presence of the President of the United States, by her special representatives and a vast gathering of the people, presented to the United States Centennial Commission a deed dedicating to said commission 450 acres of ground in Fairmount Park for the uses and purposes of the said Centennial Exhibition. The President of the United States, by his special representative, commended the proposed celebration to the favor and support of the people of the United States, and did also call the attention of the governments of foreign countries to the proposed international exhibition of arts, manufactures, &c., to the end that all might participate therein.

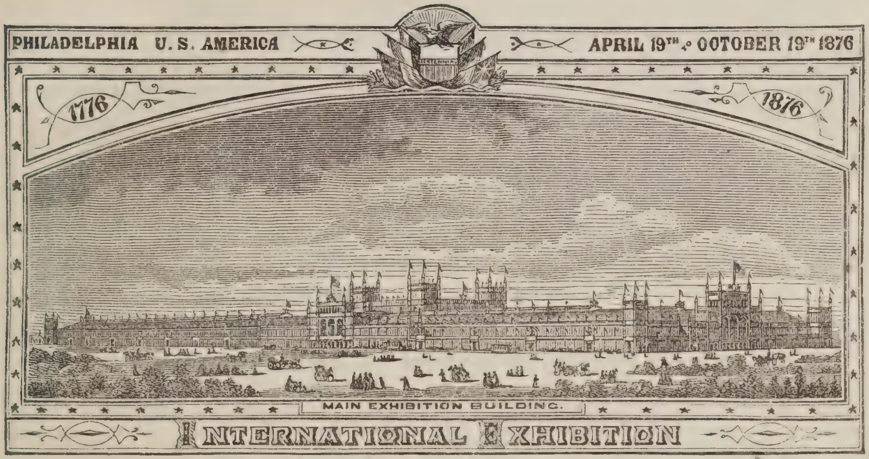
THE INVITATION TO FOREIGN NATIONS.

Then, again, Congress, at its last session, while adhering to the policy indicated in its laws of 1871 and 1872 that the capital necessary for preparations should arise from the voluntary contributions of the people, passed a law facilitating the raising of capital, and another providing for the admission of articles for exhibition from foreign countries free of duty ; and another, in the following terms, to wit : " That the President be requested to extend, in the name of the United States, a respectful and cordial invitation to the governments of other nations to be represented and take part in the International Exhibition, to be held at Philadelphia, under the auspices of the government of the United States, in the year 1876 ;" and we are informed that that cordial invitation, under direction of the President, has gone out to all the civilized nations of the world.

These matters having been officially settled by Congress the Board of Finance at once commenced its work and in the hands of an energetic building committee, contracts were made on favorable terms for the commencement of the appropriate buildings. As is well known to our readers the first of these buildings placed under contract, was the Memorial Hall or Art Gallery, for the erection of which the State of Pennsylvania and the city of Philadelphia have appropriated $1,500,000. This magnificent building has received universal commendation for the beauty of its design and its adaptability to the purposes for which it is destined. After the close of the exhibition it will remain as an heirloom to be handed to our children's children as an evidence of the patriotism of the Keystone State. This building is of granite, glass and iron, thoroughly fire proof, 365 feet long; 210 feet in width and 59 feet in height, the whole surmounted with a dome which rises from the centre of the structure to the height of 150 feet from the ground, it is intended especially for the display of fine arts during the international exhibition and will prove one of the most effective features of interest in 1876.

MEMORIAL HALL—ART GALLERY.

The inner walls of this building are nearly completed, and the granite is being placed with great rapidity. The contract requires that it shall be completed in perfect readiness for use six months in advance of the opening of the exhibition The second building put under contract was the main exhibition building, which will be the principal object of attraction in 1876. This edifice is to be built mainly of iron and glass, the foundations are completed, and the material to be used is being rapidly produced at the various mills and factories of our own State. It will cover at least twenty acres of space, the length east and west being 1,880 feet, width 464 feet, heighth 70 feet, heighth of central towers 120 feet. The area, covering 936,008 square feet, is to be divided into parallel zones lengthwise of the building, countries and States occupying parallel sections crosswise of the building, thus bringing the products of each class from the whole world into the same line. The remaining buildings are the machinery hall, occupying fourteen acres. The agricultural department, ten and a half acres, and a conservatory and horticultural hall, three hundred and sixty feet long and one hundred and sixty feet wide, all of which cover over fifty acres, and are under contract, or nearly so, with every surety that they will be completed in due season. The entrance to the main building will be from Elm avenue, with every facility for transportation from every section of the city, either by horse cars, by the steam railroads, by the boats on the Schuylkill, or by carriage and omnibus. At no former exhibition have the facilities been so complete for visitors through the immense iron net work which reaches all over our continent, parties can take their seats either at Montreal or San Francisco and land directly in the exhibition building without change of cars. We would again remark here that it is eminently the interest of this State that our own roads should so reduce their fare as to secure the largest number of passengers which they may have the capacity to transport.


PHILADELPHIA U. S. AMERICA
APRIL 19TH OCTOBER 19TH 1876
1776
1876
MAIN EXHIBITION BUILDING.
INTERNATIONAL EXHIBITION

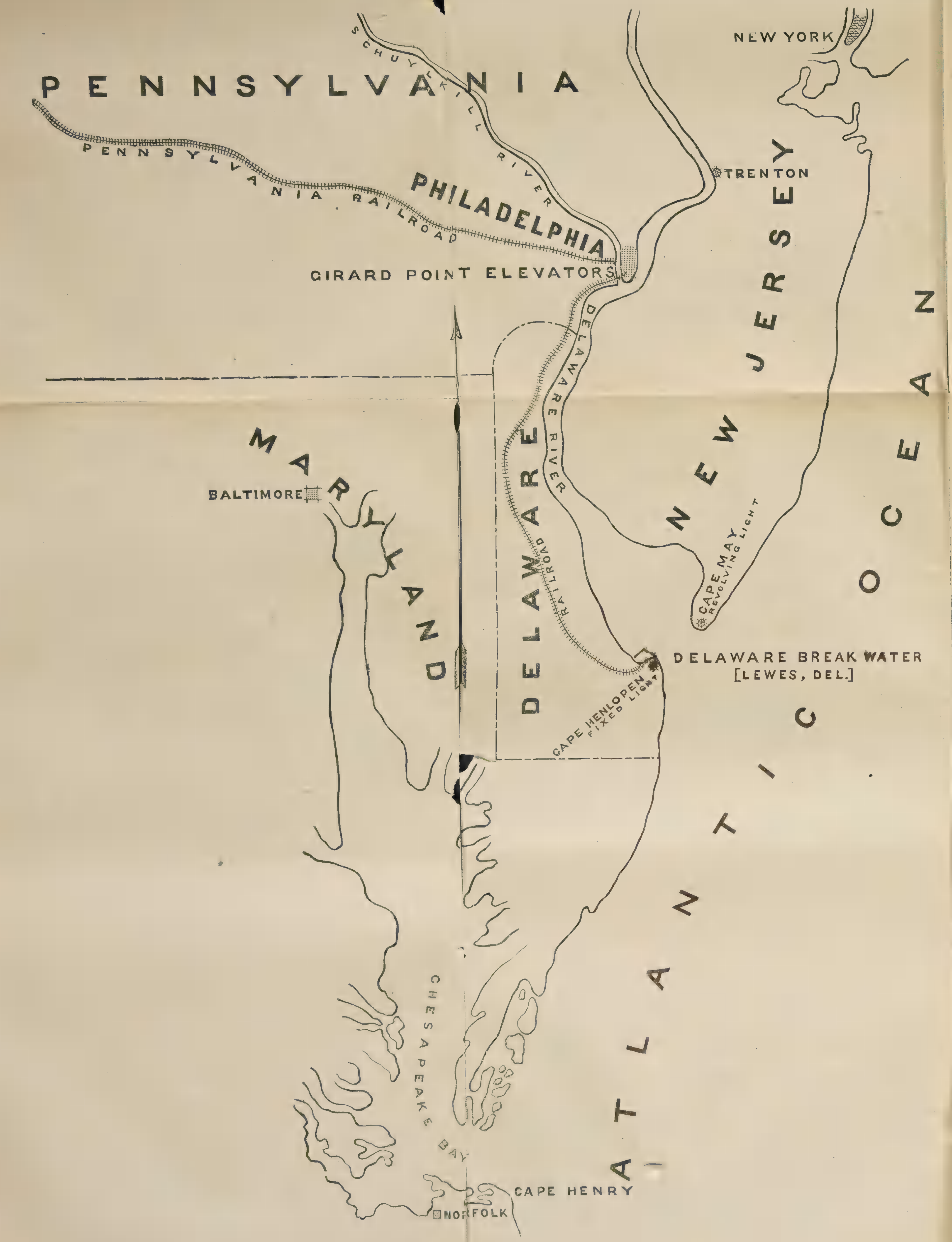
As to the success of the exhibition, we feel warranted in saying that a wide spread interest has been awakened, and the present indications signify a marked success. Already the applications for space from our own people are nearly equal to the entire space set apart for the United States. We have sufficient reason to believe that in the departments of useful machinery, manufactures and natural productions the display will be grander than anything of the kind heretofore witnessed.

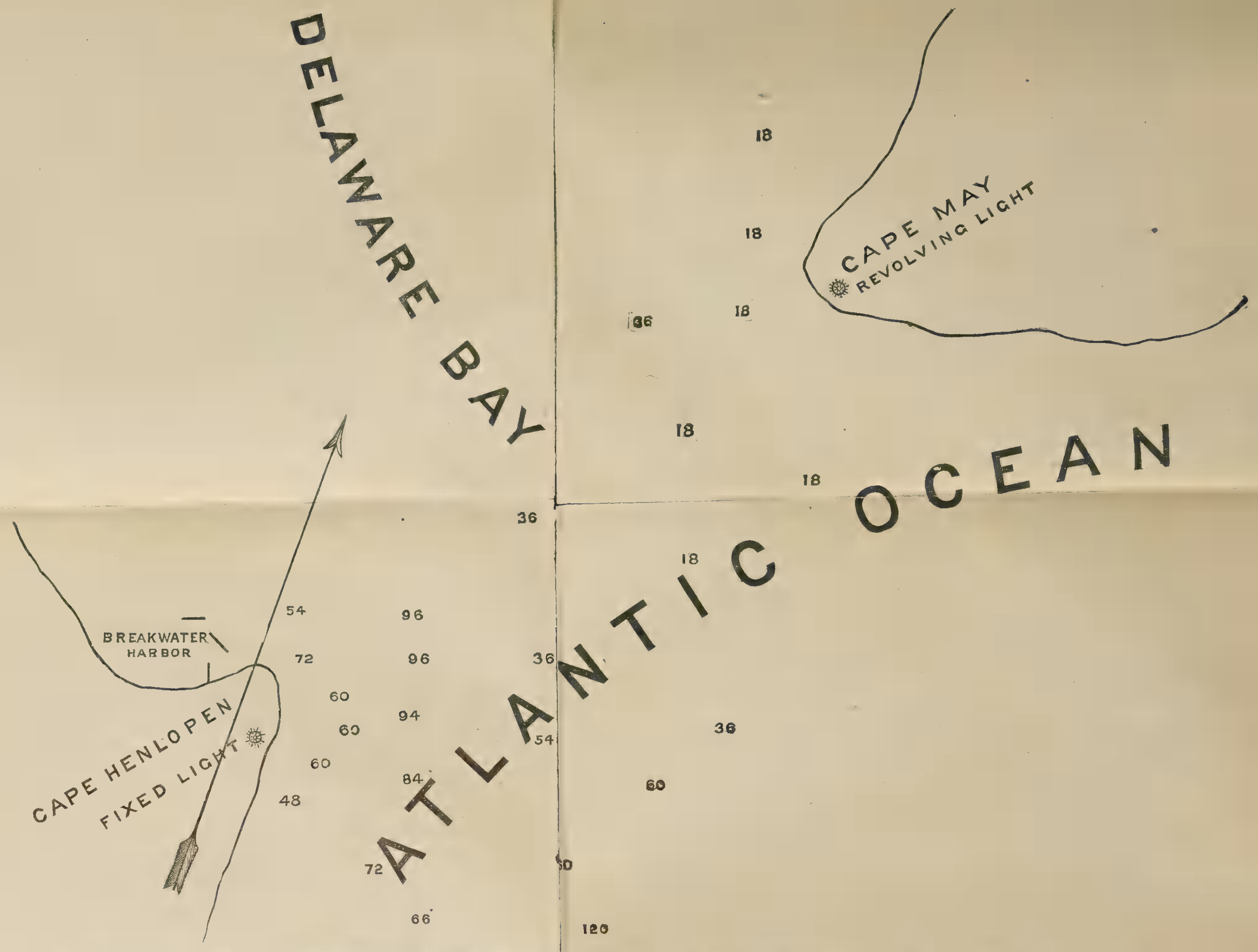
ACTION OF FOREIGN COUNTRIES.

The indications as to the display from foreign countries at this date, a year and a half in advance of the beginning, are far more favorable than had been anticipated by the managers. The following named countries have taken action, to wit: The German Empire has accepted the invitation of the President; France has accepted, and has appointed commissioners resident in Philadelphia and New York; Sweden and Norway have appointed a commission, and have gone so far as to provide for defraying the cost of transportation of goods of their subjects to the exhibition and home; Great Britain has accepted in the most cordial manner, and it is surmised that the Prince of Wales will head the commission. In several of the British colonies—especially in Canada, Australia, New Zealand, Tasmania, and others of the Australasian islands, exhibitions of unusual completeness and interest have been prepared; in Austria a large number of manufacturers and artisans have solicited space in the exhibition buildings. The governments of Central America and South America have manifested special interest in the exhibition, and the President's invitation has been accepted by Peru, United States of Colombia, Nicaragua, the Argentine Confederation, Brazil, Venezuela, Ecuador, Chili, Guatemala and Salvador, and for these countries commissioners have been appointed, and the money appropriated for their expenses. Mexico, Honduras and Hayti have also accepted the invitation. Brazil and other South American nations have made application for space. In addition, the Netherlands, Belgium, Liberia, the Sandwich Islands, China, Japan and Switzerland have accepted the invitation. Spain has accepted, and appointed Senor Emilio Castelar, the eminent republican statesman, to be her resident commissioner at the American exhibition.

The means to the celebration provided for by Congress we regard as most fortunate. Great exhibitions, displaying the progress of the several nations in civil arts, always impart most valuable lessons. Nothing has done more for England and France within the past quarter of a century than their great international exhibitions, and no one can doubt that the coming exhibition will be followed by similar results to our country.

We have thus given in brief such facts as it seemed of importance to incorporate in this report; and in our report for 1875 we earnestly trust not only to record the completion of the work, but also its large increase necessitated by the demand for space from our own and foreign countries.


PENNSYLVANIA
SCHUYLKILL RIVER
PENNSYLVANIA RAILROAD
PHILADELPHIA
GIRARD POINT ELEVATORS
NEW YORK
TRENTON
NEW JERSEY
DELAWARE RIVER
DELAWARE
RAILROAD
MARYLAND
BALTIMORE
CAPE MAY
REVOLVING LIGHT
DELAWARE BREAK WATER
[LEWES, DEL.]
CAPE HENLOPEN
FIXED LIGHT
ATLANTIC OCEAN
CHESAPEAKE BAY
CAPE HENRY
NORFOLK


DELAWARE BAY
CAPE MAY
REVOLVING LIGHT
ATLANTIC OCEAN
BREAKWATER HARBOR
CAPE HENLOPEN
FIXED LIGHT
18
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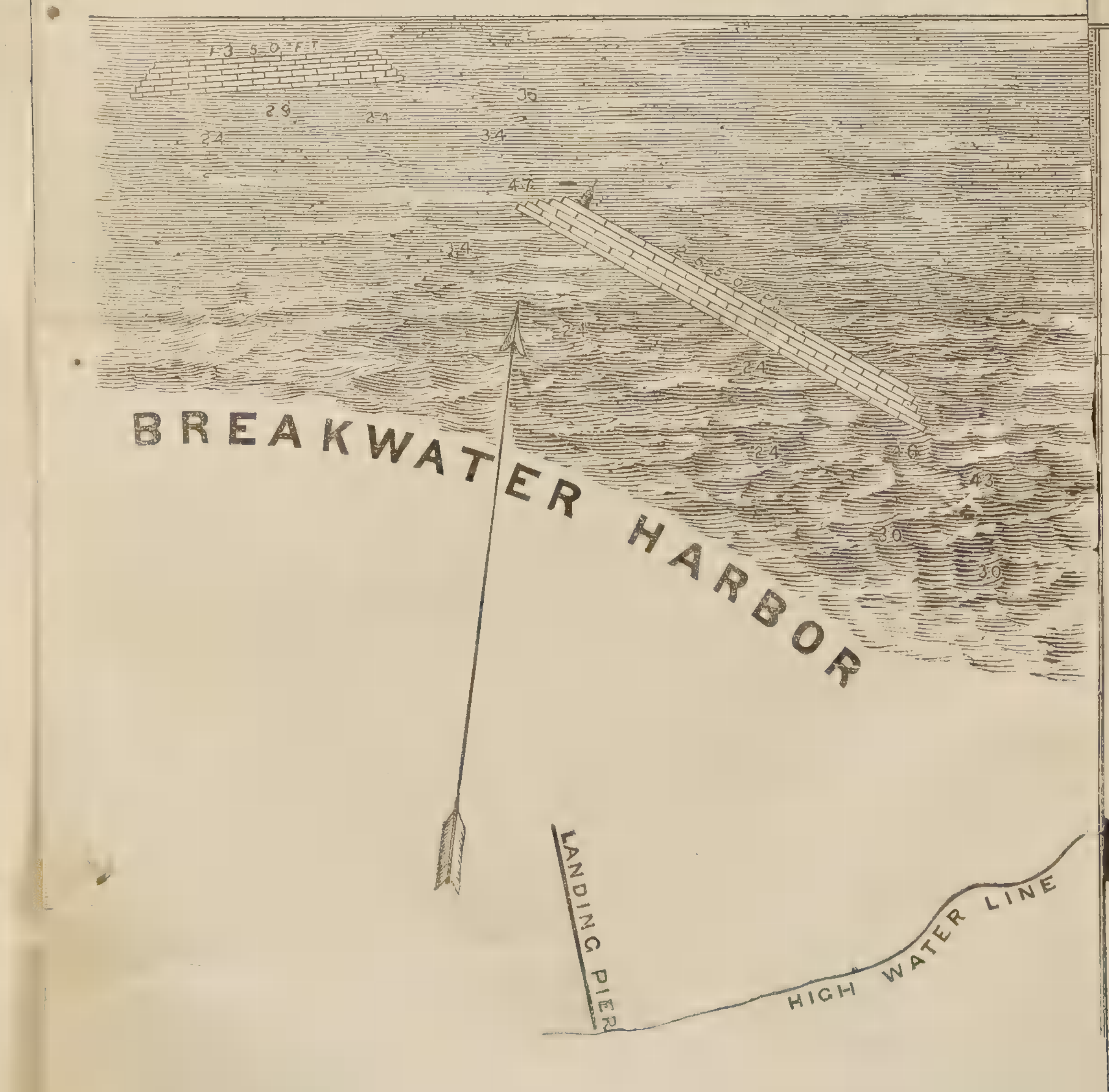
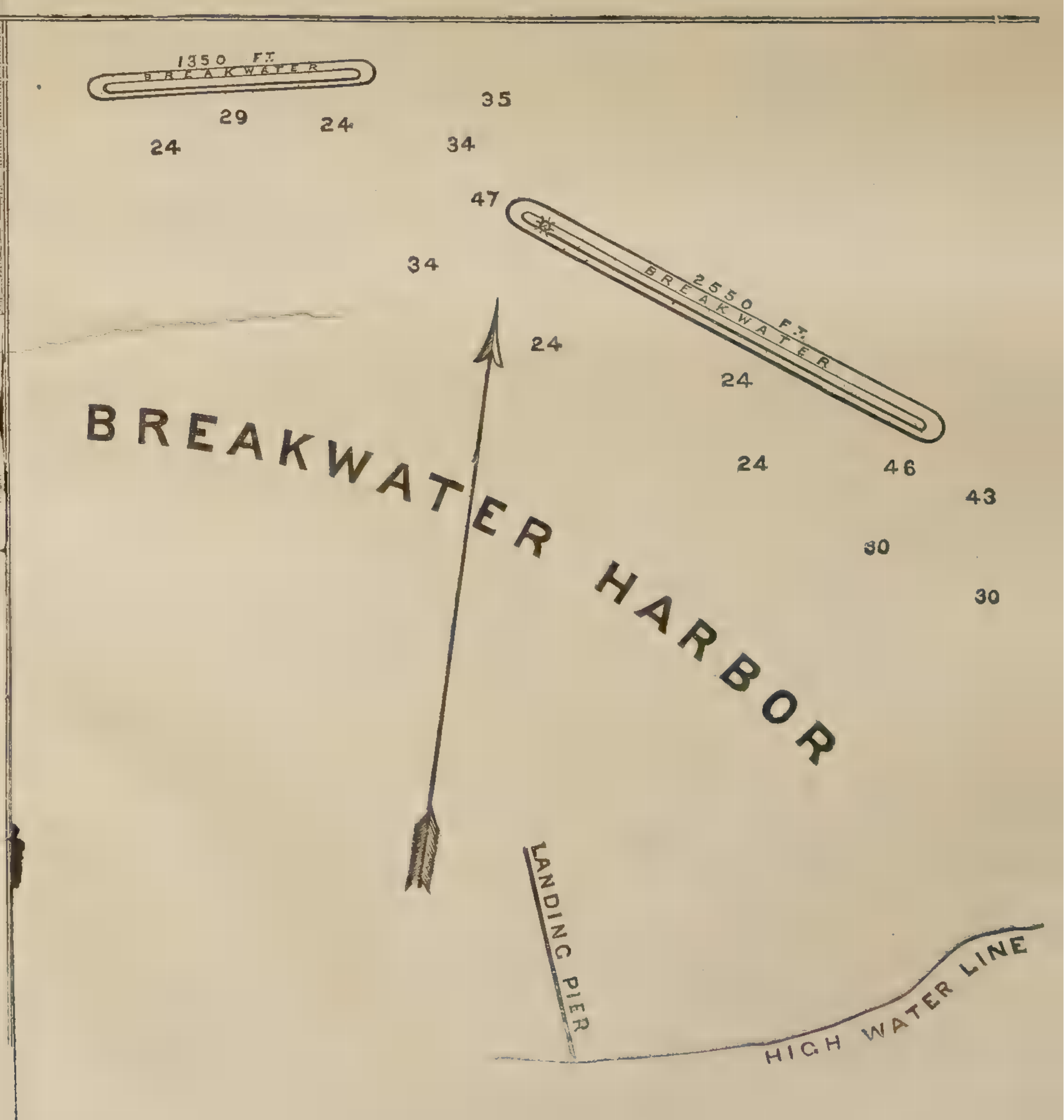

BREAKWATER HARBOR
LANDING PIER
HIGH WATER LINE


1350 FT.
BREAKWATER
2550 FT.
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30
BREAKWATER HARBOR
LANDING PIER
HIGH WATER LINE

THE DELAWARE BREAKWATER.

One of the finest natural harbors on the Atlantic seaboard is formed by the Delaware Bay, situated midway between the harbors of New York and Hampton Roads, it lies in the direct track of commerce between the Northern and Southern States and South America, and, moreover, forms one of the most convenient ports of call for vessels from Europe and the Eastern hemisphere. Protected naturally by the head lands of Cape Henlopen and Cape May, science has also lent its aid to improve the safety of the anchorage, and by the construction of the massive sea walls, known as the Delaware breakwater, the harbor has been made one of the safest in the world. These works which are of great magnitude were completed by the government in 1869. The longer wall is 2,500 feet in length, the shorter 1,400 feet. They are built of the heaviest stones on rock foundations, and the storms of past years only demonstrate their strength.

Vessels of any size can lie in deep water, close to these defences, and the navies of the world could shelter behind them in perfect security.

The harbor proper is immediately inside of Cape Henlopen, on the south side of the entrance to Delaware Bay. The entrance channel is broad and deep, and the anchorage so near the course of passing vessels as to entail the least loss of time in reaching or leaving it.

The approaches and neighboring waters are well supplied with lights. Upon Cape May, at the north-eastern side of the entrance to the bay, there is a very powerful white light of the first order, flashing at half minute intervals; this is visible at a distance of eighteen nautical miles. Upon Cape Henlopen, at the south-western side of the entrance to the bay, there is a powerful fixed white light, also of the first order, visible at a distance of seventeen nautical miles; and at a distance of seven-eights of a mile from the main light there is a white beacon, visible at a distance of twelve nautical miles. Upon the Breakwater is a fixed beacon varied by white flashes at intervals of three-quarters of a minute.

There are several life saving stations in the vicinity, while a government steamer cruises in the neighborhood for the assistance of disabled vessels.

The harbor has peculiar facilities for communications with all parts of the world. The Western Union telegraph company, whose wires reach this point, have arrangements for giving special attention to messages for vessels, and cables or telegrams addressed merely with vessels' name are delivered to the captain, while Delawarebreakwater in such messages, if so written, is only charged as one word. The government has built a magnificent iron pier, 1,500 feet long, extending out into deep water, and communication can be had with vessels at anchor in the harbor at all times; this pier is to be still further lengthened.

The holding ground for vessels anchoring there is of the very best description, and by the construction of some further improvements, which are now under consideration by the national government, the harbor will be made to rank with any in the world. Reference is asked to the enclosed diagrams for additional information concerning this magnificent port of call, and which bears such intimate relation and influence on the commerce of Pennsylvania.

VITAL STATISTICS.

MARRIAGES, BIRTHS AND DEATHS IN PHILADELPHIA, 1873.

MONTHS.	Marriages.	Births.	Deaths.
January	642	1,670	1,724
February	588	1,507	1,299
March	463	1,544	1,658
April	674	1,295	1,287
May	659	1,410	1,272
June	711	1,483	1,289
July	570	1,705	2,265
August	520	1,700	1,443
September	660	1,549	1,129
October	828	1,636	1,316
November	749	1,634	1,024
December	827	1,569	1,030
Total	7,891	18,702	*16,736

Marriages, 10.52 in every 1,000 of population.
Births, 24.93 in every 1,000 of population.
Deaths, †20.29 in every 1,000 of population.

BIRTHS.

The following table will show the number of births in each month, the number of colored and still births, and twins:

MONTHS—1873.	Total.	Births.		Black.		Still-born.		Twins....
		M.	F.	M.	F.	M.	F.	
January	1,670	884	786	15	15	54	49	9
February	1,507	772	735	11	11	38	25	14
March	1,544	804	740	10	11	41	32	7
April	1,295	700	595	10	12	47	34	12
May	1,410	753	657	11	15	43	37	14
June	1,483	789	694	12	20	45	34	12
July	1,705	869	836	19	10	41	35	16
August	1,700	929	771	20	11	29	30	16
September	1,549	807	742	14	13	38	22	7
October	1,636	853	783	18	10	41	38	11
November	1,634	862	772	15	19	44	22	10
December	1,569	823	746	6	16	41	31	15
Total	18,702	9,845	8,857	161	163	502	389	143

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*Includes still-born and deaths from other localities.
†Based on actual deaths in our city.

The number of births in each quarter of the year, was as follows:

First quarter, ending March 31	4,721
Second quarter, ending June 30	4,188
Third quarter, ending September 30	4,954
Fourth quarter, ending December 31	4,839
Total	18,702

MARRIAGES.

AGES OF THE PARTIES.

The following table will show the ages of the parties married during the year 1873:

1873.	AGES OF THE WOMEN.									Total men.
	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Not given	
Ages, men:—										
Under 20	33	6		1					1	41
20 to 25	1,119	1,601	172	27	1				14	2,934
25 to 30	352	1,223	599	124	8	1			17	2,324
30 to 40	74	468	480	348	40	4			15	1,429
40 to 50	3	44	96	212	84	9			1	449
50 to 60		7	14	54	52	22	3			152
60 to 70		1	1	9	13	8	5		1	38
70 to 80					2	3	1	1		7
80 to 90				1		1				2
Not given	4	4		2					505	515
Total, women	1,585	3,354	1,362	778	200	48	9	1	554	7,891

The number of men married under twenty was only forty-one, (41,) while the women amounted to one thousand five hundred and eighty-five, (1,585,) two thousand nine hundred and thirty-four, (2,934) men were married between the ages of twenty and twenty-five, of whom one thousand one hundred and nineteen, (1,119) married women under twenty, one thousand six hundred and one, (1,601) married women between twenty and twenty-five; one hundred and seventy-two, (172) married women between twenty-five and thirty, twenty-seven (27) married women between thirty and forty, and one (1) married woman between forty and fifty. Fifty-eight (58) women over the age of fifty were married, and one hundred and ninety-nine (199) men over the same age were married.

The ages of five hundred and fifteen (515) men, and five hundred and fifty-four (554) women were omitted.

MORTALITY.

The number of interments in the city during the year amounted to sixteen thousand seven hundred and thirty-six, (16,736,) a decrease from the previous year of three thousand eight hundred and eight, (3,808,) or 18.53 per cent.

Total number of interments during the year 1873		16,736
White		15,757
Colored		979
Total		16,736
Males		8,635
Females		8,101
Total		16,736
Male adults	4,223	
Female adults	4,160	
		8,383
Male children	4,412	
Female children	3,941	
		8,353
Total		16,736
Deaths from registered diseases		14,524
Deaths from still-born		891
Deaths from old age		538
Deaths from unknown, external and accidental causes		783
Total		16,736
Deduct still-born	891	
Deduct from other localities	621	
		1,512
Actual deaths in city		15,224

Taking the actual deaths in our city, fifteen thousand two hundred and twenty-four, (15,224,) and making the basis of our calculation on the increase of the population, (750,000,) we find the deaths in our city to be one in every 49.26 of the population.

The following table shows the percentage of deaths during specified periods of life, compared with a similar statement of the mortality in the year 1872:

	1872.				1873.			
Under 1 year......	5,862	Being	28.53	per cent.	5,121	Being	30.59	per cent.
1 to 2 years......	1,706	“	8.30	“	1,074	“	6.41	“
2 to 5..do.......	1,586	“	7.72	“	956	“	5.71	“
5 to 10..do.......	782	“	3.80	“	448	“	2.61	“
10 to 15..do.......	423	“	2.05	“	265	“	1.57	“
15 to 20..do.......	685	“	3.33	“	489	“	2.92	“
20 to 30..do.......	2,163	“	10.52	“	1,710	“	10.21	“
30 to 40..do.......	1,892	“	9.29	“	1,515	“	9.05	“
40 to 50..do.......	1,497	“	7.29	“	1,337	“	7.98	“
50 to 60..do.......	1,178	“	5.73	“	1,125	“	6.72	“
60 to 70..do.......	1,139	“	5.54	“	1,133	“	6.76	“
70 to 80..do.......	991	“	4.82	“	962	“	5.74	“
80 to 90..do.......	530	“	2.53	“	501	“	2.99	“
90 to 100..do.......	94	“	.45	“	87	“	.51	“
100 to 110..do.......	15	“	.07	“	13	“	.07	“
110 to 120..do.......	1	“	.004	“				
Total..............	20,544	....			16,736	....		

From the foregoing table it will be noticed the mortality of children under ten years of age amounted to seven thousand six hundred and nine, (7,609,) or 45.38 per cent., of the total mortality, while those under twenty years amounted to eight thousand three hundred and fifty-three, (8,353,) or 49.81 per cent., or nearly one-half of the entire mortality; six hundred and one (601) died over the age of eighty years; thirteen (13) over the age of one hundred (100;) the number of infants under one year was five thousand one hundred and twenty-one, 5,121,) or 30.59 per cent., of total mortality, almost one-third of the entire list.

The following table of mortality in each ward, with the percentage of deaths to total mortality, (still-births not included :)

WARDS—1873.	Deaths.	Per-centage
First	689	4.52
Second	651	4.27
Third	454	2.98
Fourth	574	3.10
Fifth	444	2.92
Sixth	225	1.47
Seventh	725	4.76
Eighth	401	2.63
Ninth	230	1.51
Tenth	417	2.73
Eleventh	332	2.18
Twelfth	294	1.93
Thirteenth	314	2.06
Fourteenth	371	2.43
Fifteenth	879	5.77
Sixteenth	327	2.14
Seventeenth	492	3.23
Eighteenth	652	4.28
Nineteenth	1,443	9.47
Twentieth	712	4.67
Twenty-first	265	1.74
Twenty-second	417	2.67
Twenty-third	318	2.08
Twenty-fourth	631	4.14
Twenty-fifth	441	2.89
Twenty-sixth	869	5.70
Twenty-seventh	398	2.61
Twenty-eighth	240	1.57
Twenty-ninth	444	2.91

The highest mortality occurred in the Nineteenth ward, one thousand four hundred and forty-three, (1,443,) or 9.47 per cent. of the total mortality ; the lowest number in the Sixth ward, two hundred and twenty-five, (225,) or 1.47 per cent. The deaths in the Twenty-seventh ward were three hundred and ninety-eight, (398.) (Deaths in almshouse not included in this amount.)

The following table will show a general summary of the returns of births, marriages and deaths, for the past thirteen years and six months :

Years.	Births.	Marriages.	Deaths.
1860—6 months	8,434	2,310	6,342
1861	17,271	4,417	14,468
1862	14,741	4,662	15,079
1863	15,293	5,474	15,788
1864	15,591	6,752	17,582
1865	15,428	6,864	17,169
1866	17,437	7,087	16,803
1867	17,007	6,084	13,933
1868	17,259	6,371	14,693
1869	16,960	6,382	14,786
1870	17,194	6,421	16,750
1871	18,346	6,806	16,993
1872	20,072	6,496	20,544
1873	18,702	7,891	16,736
Totals	229,735	84,017	*217,684

*Includes deaths from other localities and still-born.

The above table shows the total number of births, marriages and deaths recorded in this office since July, 1860. It will be noticed that during the years of the rebellion, 1862, 1863, 1864, the deaths exceeded the births, thus showing the disastrous effects war has upon the natural increase of population. Since the year 1865, with only one exception, (1872,) the births have exceeded the deaths, showing a natural increase of population; the year 1872 the deaths outnumbered the births, owing to the epidemic of small-pox.

DEATHS IN CITIES, 1873.

	No. of deaths.	Rate of living. 1,000.
London	74,792	22.3
Paris	42,531	23.2
Brussels	4,544	24.8
Berlin	29,954	30.6
Vienna	19,809	32.7
Rome	7,152	29.3
Turin	5,537	24.8
Calcutta	11,782	25.3
Bombay	15,617	24.1
New York	28,490	27.9
Philadelphia	16,736	20.3

AREA OF THE CITY OF PHILADELPHIA.

WARDS.	Area in acres.	Area in sq. miles.
First	3,526	5.509
Second	283	.442
Third	122	.191
Fourth	147	.229
Fifth	206	.321
Sixth	206	.321
Seventh	281	.439
Eighth	279	.435
Ninth	256	.400
Tenth	230	.359
Eleventh	135	.210
Twelfth	124	.193
Thirteenth	164	.259
Fourteenth	152	.237
Fifteenth	671	1.049
Sixteenth	180	.281
Seventeenth	161	.251
Eighteenth	416	.650
Nineteenth	903	1.455
Twentieth	469	.734
Twenty-first	4,560	7.129
Twenty-second	11,593	18.114
Twenty-third	27,339	42.716
Twenty-fourth	6,224	9.725
Twenty-fifth	6,630	13.660
Twenty-sixth	5,100	8.000
Twenty-seventh	7,475	11.680
Twenty-eighth	4,060	6.343
Twenty-ninth	900	1.400
Total	82,603	129.382

APPENDIX.

ARTICLES TOO LATE FOR CLASSIFICATION IN MAIN PART OF REPORT.

APPENDIX.

STATE TAXATION IN PENNSYLVANIA.

An old maxim warns us that in this busy world "none escape death and few taxation." The absolute certainty of the first should admonish us to be ever ready; and the imperative necessity of the second requires us to submit without needlessly ruffling our tempers. All forms of government require the citizen to contribute some portion of his income to insure the protection of his life and property and the amount thus contributed is called his tax. Whether this taxation is heavier or lighter must largely depend upon the wisdom which enacts our laws and the economy and faithfulness of their administration. The manner in which the exact proportion due from each member of society shall be ascertained and collected, has at all times and in all countries been a subject of great perplexity It has puzzled the wisdom of statesmen and philosophers, some of whom have solved the problem to their own satisfaction, but very rarely to the satisfaction of the tax-payer. The question of taxation is one in which every citizen is interested and upon which we are all very sensitive. It appeals directly to our pockets and we are easily inclined to listen to any argument, however fallacious, tending to show that we are too heavily burdened. Our prejudices are frequently applied to, even in Pennsylvania, by the cry of "taxes! taxes!" To show how little ground there is for complaint, and how, on the contrary, there is great reason for congratulation on the part of citizens of Pennsylvania, for the manner in which the question of State taxation is here disposed of will be the object of this article; and I know of no way in which this can be done more satisfactorily than by a comparison of the annual revenues of our State with those of other States, giving also the sources from whence the revenues are derived. Take for instance New York and Massachusetts, two prosperous and wealthy Commonwealths. According to the annual financial reports of these States for the year 1873, (reports for 1874 cannot be obtained at this writing,) and of Pennsylvania for 1874 the revenue of the States named was as follows:

Pennsylvania, for 1874..................................	$5,871,968
Massachusetts, for 1873................................	11,894,918
New York, for 1873, (not including receipts from canals)...	18,550,210

From these figures it will be seen that the State of Pennsylvania, having a population nearly equal to that of New York and more than double that of Massachusetts, is governed at an expense of less than one-third the cost of government in New York and less than one-half that of Massachusetts. This exhibit is very gratifying and speaks volumes in favor of the wisdom and economy with which our finances are at present managed. In addition to the small amount of revenue required for State purposes we must also consider the sources from which that revenue is derived and the manner in which it is collected. In New York and Massachusetts the great bulk of revenue is raised by direct taxation, no tax being imposed upon the franchises of corporations. In Pennsylvania it is quite different. For years the simplicity and economy of our system of State taxation has been the envy and the admiration of our sister States and an abundant source of satisfaction on the part of citizens of our own. While the revenues of other Commonwealths have been raised principally from taxes falling directly upon the people, by far the greater proportion of our revenues are derived from corporations. We have no State tax whatever upon real estate and but a very light one on personal property. By our system the burden of State taxation is lifted almost entirely from the shoulders of the private citizens and falls without oppressive weight upon the corporations. It is at once simple, effective and economical. No army of commissioned assessors and collectors is required, the taxes of corporations being paid directly into the State Treasury upon accounts settled by the Auditor General and State Treasurer, without the deduction of any commission or expense whatever; and for this reason alone the amount of revenue required to be assessed is undoubtedly from ten to fifteen per cent. less than would be required under any other system.

The sources of our revenue in 1874 were as follows:

Tax on corporation stocks	$1,400,118	80
Tax on gross receipts	81,887	29
Tax on tonnage	130,931	35
Tax on coal	82,601	26
Tax on incomes	89,207	41
Tax on loans	418,381	66
Tax on bank stock	304,064	93
Tax on coal companies	80,084	58
Tax on foreign insurance companies	292,733	40
Tax on personal property	545,523	24
Tax on writs, wills, deeds, &c	157,783	21
Bonus or premiums on charters	56,498	13
Collateral inheritance tax	350,676	45

Retailers', tavern, &c., licenses	$871,803 22
Collections on outstanding indebtedness	875,160 00
Miscellaneous	134,513 34
	$5,871,968 27

The total revenue in 1874 was $1,204,754 93 less than in 1873, taxes to about that amount having been repealed absolutely by the Legislatures of 1873 and 1874. Recent decisions of the Supreme Court and the new Constitution having seriously affected the existing tax law, the Legislature of last winter found it necessary to very materially alter them. The items which in the foregoing statement are designated as taxes on gross receipts, tonnage, coal, income and loans have all been repealed. The tax on capital stock of railroad companies was increased to meet in part the deficiency arising from the repeal of some of the other taxes and a tax on coal companies takes the place of the tax on coal.

A classification of the figures in the foregoing statement shows that of the total revenue for 1874 there was derived as follows:

From corporations by direct taxation	$2,936,508 81
From corporations as interest on bonds, commutation, &c,	875,160 00
Total from corporations	3,811,668 81
From taxes on the people generally	$2,060,299 46
Total revenue in 1874	5,871,968 27

Of the two millions of dollars put down as taxes on the people generally, nearly one-half is derived from licenses and is but indirectly a tax on the people.

It is sometimes urged that the taxes on corporations fall ultimately upon the people in the shape of increased prices, railroad freights, &c. That this is not the case to any great extent can be clearly demonstrated, but even were it true to its fullest extent, it would only add another argument in favor of the system; for in no other way could the burden be so evenly and justly distributed.

It is worthy of mention, that notwithstanding the smallness of the revenue in 1874, our State debt has been reduced to the extent of $1,230,186 57; and it may be added that there is no State in the Union which, in proportion to its population and importance, is governed at so little expense as ours, no State where the burdens of State taxation fall so lightly, and no State whose securities command in market so high a price as those of Pennsylvania. Upon these facts we may congratulate ourselves.

STATE TAXATION FOR THREE YEARS.

STATEMENT *of receipts at the State Treasury from the several sources of revenue during the fiscal years ending November* 30, 1872, *November* 30, 1873, *and November* 30, 1874 :

SOURCES OF REVENUE.	1872.	1873.	1874.
Corporations:			
Railroad, canal, express, navigation and transportation companies	$2,412,730 75	$2,869,082 80	$1,256,459 54
Coal, iron, improvement, mining and manufacturing companies	438,197 88	660,538 52	573,379 64
Passenger railway companies	74,134 40	74,537 19	43,984 11
Bridge, turnpike and plank road companies	31,231 61	34,368 25	27,611 24
Banks	341,021 31	342,499 63	329,693 30
Counties, cities and boroughs	102,464 21	107,057 19	111,322 35
Gas and water companies	36,750 26	50,633 92	30,977 12
Oil companies	90,482 93	48,221 37	33,909 70
Telegraph companies	6,564 50	7,952 01	7,207 11
Insurance companies, (domestic,)	116,389 59	113,990 76	87,017 78
Insurance companies, (foreign,) licenses, &c	351,396 08	353,490 78	292,775 07
Premiums on corporation charters	101,584 74	68,343 76	56,498 13
Annuity for right of way, (Erie railroad,)	10,000 00	10,000 00	10,000 00
All other companies and associations	24,693 01	46,636 00	82,233 87
Miscellaneous taxes:			
Tax on personal property	561,316 12	541,607 91	545,523 24
Notaries public, tax on receipts	1,683 67	2,711 27	2,670 53
Notaries public, commissions	....	7,450 00	7,225 00
Tax on enrolment of laws	30,080 00	36,800 00	2,620 00
Tax on logs	900 00	1,500 00	1,600 00
Tax on writs, wills, deeds, &c	119,380 32	113,117 52	128,508 11
Tax on certain offices	20,770 56	10,723 89	6,619 34
Collateral inheritance tax	354,819 98	327,973 99	379,610 70
Tavern licenses	346,116 70	321,322 73	326,978 92
Retailers' licenses	424,941 83	424,974 89	444,979 33
Theatre, circus and menagerie licenses	3,020 45	5,121 75	5,286 75
Billiard, bowling saloon and ten-pin alley licenses	7,064 59	10,552 94	8,909 59
Eating house, beer house and restaurant licenses	42,316 81	42,165 02	44,801 63
Peddlers' licenses	2,679 61	2,830 38	2,948 40
Brokers' licenses	5,335 75	10,736 98	13,415 96
Patent medicine licenses	1,112 00	3,875 91	5,905 66
Brewery and distillery licenses	5,821 45	8,009 47	7,739 15
Millers' tax	641 16	4,486 84	1,590 29
Pamphlet laws	510 20	714 67	543 51
Fees of public officers	5,801 00	19,681 57	28,676 26
Auctioneers' commissions and duties	36,703 97	....	....
Auctioneers' commissions	....	13,765 34	18,761 03
Fines and penalties	....	4 00	12 00
Stevedore licenses	....	....	191 72

STATEMENT OF RESOURCES AT STATE TREASURY—*Continued.*

SOURCES OF REVENUE.	1872.	1873.	1874.
Collections on outstanding indebtedness:			
Refunded cash	$4,938 05	$3,715 70	$5,340 55
Dividends on bridge stocks	240 00	....	160 00
Sale of public property and escheats	26,202 45	....	29,666 97
Sale of public property	....	100 00	....
Cases of conscience	880 00	945 00	....
Accrued interests	4,204 31	4,297 97	10,108 50
Lands patented	45,724 73	53,035 48	32,695 18
Commutation of tonnage tax, as per act, 1861	460,000 00	230,000 00	690,000 00
Allegheny Valley railroad, interest on bonds, per act 1869	87,500 00	87,500 00	175,000 00
	6,738,346 95	7,077,073 40	5,871,968 27

The revenue of 1874 appropriated by law:

First. To the Sinking Fund	$3,054,939 07
Second. To general expenses of government	2,817,029 20
	5,871,968 27

STATE EXPENDITURES FOR THREE YEARS.

TABLE *showing expenditures of the Commonwealth for the years* 1872, 1873 *and* 1874.

	1872.	1873.	1874.
Senate	$171,845 04	$107,037 37	$134,460 76
House of Representatives	236,689 89	260,763 88	269,084 13
Public printing	101,047 21	131,916 43	152,252 85
Executive department	30,830 69	40,503 39	14,320 11
Judiciary	331,474 30	348,916 01	383,800 07
Public offices	83,034 53	94,513 79	141,706 21
Military expenses	22,122 17	72,242 82	63,437 31
Packing and forwarding laws	1,290 00	1,383 90	529 50
Paid electors of President and Vice President		703 00	
Constitutional Convention		410,723 80	86,461 42
Pensions and gratuities	54,831 11	50,334 57	43,889 77
Centennial Committee	6,325 31	6,755 14	
Charitable institutions	441,527 10	439,307 13	689,889 48
Soldiers' orphan schools	471,986 41	469,308 94	419,295 64
Common schools	667,191 50	804,097 89	838,082 24
Pennsylvania State Agricultural Society	2,000 00	2,000 00	2,000 00
Amendments to Constitution	10,900 96	7,366 94	140 00
Loans redeemed, &c	2,511,172 87	1,551,762 57	1,262,234 72
Interest on loans	1,706,032 88	1,563,029 20	1,466,374 34
Damages and old claims	13,670 23	2,206 97	4,948 00
Harbor master, Philadelphia	1,874 99	2,708 34	2,916 66
Port warden, Philadelphia	2,500 00	2,499 99	2,291 66
Inspectors of coal mines	24,775 03	23,223 06	24,474 88
State library	6,550 00	8,750 00	7,100 00
Public buildings and grounds	29,636 64	90,591 23	101,738 84
Houses of Refuge	71,900 00	55,325 00	42,500 00
Penitentiaries	58,324 30	73,882 02	68,762 02
Escheats	7,459 34	693 80	7,014 03
Counsel fees and commissions	8,332 22	3,000 00	11,177 00
Special commissioners	2,619 57	13,255 00	25,762 91
Commissioners to adjust claims for damages in border counties	7,945 19		
Mercantile appraisers	1,784 79	2,188 47	2,698 47
Luzerne county riots	538 34		
Board of Public Charities	5,943 18	7,543 23	7,767 76
Revenue commissioners	1,800 00		
County surveyors	1,960 00	5,865 00	3,324 00
Assessors of bank stock		15,071 19	15,614 09
Inaugural expenses		4,974 19	
Funeral of ex-Governor John W. Geary		4,306 41	
Miscellaneous	45,074 64	50,026 90	24,902 05
Williamsport riots			396 77
Susquehanna Depot riots			16,693 03
Centennial exposition			71,815 22
Domestic creditors			58 61
Mechanics' High School			685 22
Board of Pardons			1,458 34
Geological survey			16,000 00
Stationery, fuel, &c			2,020 59
Publishing new Constitution			202,782 19
Advertising for proposals			9,706 97
Total			6,642,567 86

RAILROADS IN PENNSYLVANIA.

CARTERSVILLE, GEORGIA,
December 13, 1874.

GOVERNOR:—I wish to find a history of the inauguration of your railroad system in Pennsylvania and the inception of the movements for the development of the coal mines in your State. It appears to me that these enterprises were fostered by the State government. If you can put me on track of what I want you will do me a great favor and I hope some public good.

I am a member of the Georgia State Senate and have been in the Legislature of Georgia several years. I am looking into matters kindred to those here indicated for Georgia.

I am, with high respect,
JOHN W. WOFFORD.

To the Governor of Pennsylvania.

BUREAU OF STATISTICS,
HARRISBURG, *December* 28, 1874.

JOHN W. WOFFORD, ESQ.,

SIR:—Governor Hartranft has referred yours of December 13th to my department for answer.

The development in Pennsylvania of her coal mines, canals and railroads would require a volume to answer. Nearly fifty years since the agitation of this subject in our State resulted in an extensive undertaking by the State itself of works of internal improvement. In accordance with the notions of the day these were chiefly canals, railroads being only used to connect our canals where a supply of water could not be had. The result of that policy was the construction by the State of what was known as her "main line," about a dozen of branches and subscriptions to canals, railroads, turnpikes and bridges in all parts of the State, costing about as follows:

	Aggregate cost.
Main line, (126 miles railroad, 292 miles canal,)	$18,615,663 00
Branch canals and railroads	16,484,419 00
Stocks in various corporations	6,194,380 00
	41,294,462 00

These corporations were managed by a board of canal commissioners. Their management was not satisfactory to the public, more on account of their constant interference in politics than even the loss incurred. The most of the profitable corporation stocks had been sold in 1843, the main line was sold in 1857, the branch canals in 1858, and about the same time the constitutional amendment of 1857 was adopted prohibiting the State from constructing any such works on her own account or being a stockholder in any railroad, canal or other kindred work.

The main line,	costing $18,615,663,	was sold for $7,500,000,	loss $11,115,663
Branch canals, &c.,	" 16,484,419,	" 3,500,000,	" 12,984,419
Corporation stocks,	" 6,194,380,	" 1,440,130,	" 4,754,250
	41,294,462,	12,440,130,	28,854,332

Financially, therefore, Pennsylvania has not much to boast of in her investments in canals. She is, however, better off than her sister New York, which upon a still larger investment in canals has not realized for many years past enough to pay the cost of their management. Private companies, in Pennsylvania, have invested over $36,000,000 in the construction of canals, about one-half of which are paying from three to six per cent. and the other half less than that upon the cost of their construction.

The building of railroads in our State, did not commence until ten or twelve years later than her canal system. The now great Reading railroad was many years in reaching the anthracite coal fields. She has now absorbed some sixteen branch railroads, two or three canals, represents an expenditure of about $73,000,000, upon which she has paid for many years ten per cent. dividends. This company has within the last few years, bought up about one hundred thousand acres of land in the anthracite coal region. She now, therefore, not only controls the entire transportation business in the counties through which her roads are located, but also owns the most productive portions of the southern anthracite coal basin. Her investments in railroads, work-shops, coal mines and iron works, cannot fall below $125,000,000, upon all which I presume she is realizing ten per cent. dividends.

The Pennsylvania railroad, a still mightier corporation, was not commenced until about ten years later than the Reading. She has now not only her own main line, but has absorbed as branches, at least two-thirds of all the railroads in our State; and beyond our State line has controlling interests in all the great east and west lines, terminating at Cleveland and Chicago on the lakes, St. Louis on the Mississippi, and Cincinnati and Louisville on the Ohio river. She also has large investments from Baltimore, Washington, and various points southward, even as far as your own State. I would estimate the investments of the Pennsylvania railroad within our own State, at about $150,000,000, and without the State, probably double that amount.

Four or five railroads centering at New York, penetrate northern Pennsylvania, and about as effectually control the coal trade of the northern anthracite basin as the Reading does the southern. I am not so well posted in reference to those roads as the former, but suppose that there is at least $50,000,000 invested in railroads and at least $25,000,000 in coal lands in the Lackawanna, Lehigh and Blossburg coal fields.

The Erie and Atlantic and Great Western, centering at New York, penetrate portions of northern Pennsylvania, and accommodate the trade of those sections. The value of their investments in our State I cannot ascertain. The Baltimore and Ohio railroad has expended about $15,000,000 in southwestern Pennsylvania. A primary design of all these investments has been to reach the iron, coal and oil products of our State. The State of Pennsylvania in her corporate capacity holds no stock in any of these railroads. The main interest held by the great corporations pay their stockholders at the rate of ten per cent. per annum. Immense amounts of individual stock in the branch roads, which had generally been partly completed before their absorption by the main lines, are worth very little to the holders. Probably not much short of $50,000,000 of original individual stock might to-day be purchased at ten per cent. on its cost.

The effect of the building of railroads has been to add ten-fold to the value of our mineral products. It has also greatly increased, but in a less degree, the value of real and personal property.

The increase of the anthracite coal trade for each period of ten years is as follows:

From 1820 to 1830	359,190	tons.
From 1830 to 1840	5,210,685	"
From 1840 to 1850	18,954,678	"
From 1850 to 1860	58,333,469	"
From 1860 to 1870	106,883,488	"

The returns for bituminous and semi-bituminous, block and gas coal cannot be so conveniently ascertained. The aggregate of all these are now nearly equal to the anthracite. The value of the anthracite at the mines is about double that of the bituminous.

Your State, Georgia, is frequently called the Pennsylvania of the South. Your State is probably in a very different position from ours. Yours, perhaps, more nearly approximates to what ours was half a century ago. Our individual wealth at that time was not sufficient to undertake the internal improvements necessary to the development of our mineral wealth. The State was then induced to undertake these improvements. Now the wealth of our citizens has so largely increased that all such works are left to the individuals. Public sentiment, concurring with the prohibitions of our Constitution, forbids the State either in her corporate capacity or as a stockholder to build such works. In Georgia the condition of things may be very different, of which her own citizens are the proper judges.

I remain yours,

THOMAS J. BIGHAM,
Commissioner of Statistics.

CONDITION OF NATIONAL BANKS.

Treasury Department,
Office of Comptroller of the Currency,
Washington, *November* 18, 1874.

Sir:—As promised you in my letter of October 10 last, I send you herewith abstracts of the reports showing the condition of the banks of Philadelphia, and of Pittsburg, and of those of the remainder of the State, exclusive of the cities named October 2, 1874.

Very respectfully,
JOHN JAY KNOX,
Comptroller.

Hon. Thos. J. Bigham,
Commissioner of Statistics, Harrisburg, Pa.

Abstract *of reports made to the Comptroller of the Currency, showing the condition of the National Banks in the State of Pennsylvania, at the close of business on Friday, the 2d day of October,* 1874.

RESOURCES.

Loans and discounts	$47,613,432 10
Overdrafts	271,849 41
United States bonds, to secure circulation	26,449,300 00
United States bonds, to secure deposits	710,000 00
United States bonds on hand	546,100 00
Other stocks, bonds and mortgages	2,071,322 55
Due from redeeming and reserve agents	4,239,534 02
Due from other National banks	1,286,824 13
Due from State banks and bankers	972,187 69
Real estate, furniture and fixtures	2,075,941 79
Current expenses	483,313 57
Premiums paid	403,410 38
Checks and other cash items	519,985 77
Bills of other National banks	834,807 00
Bills of State banks	1,759 00
Fractional currency	160,706 90
Specie	66,676 14
Legal tender notes	3,946,821 00
U. S. certificates of deposit for legal tender notes	40,000 00
Deposit with United States Treasurer	1,439,884 75
	94,133,856 20

LIABILITIES.

Capital stock paid in	$27,075,240	00
Surplus fund	7,374,302	18
Undivided profits	2,552,520	89
National bank notes outstanding	23,272,299	00
State bank notes outstanding	93,390	00
Dividends unpaid	84,668	02
Individual deposits	31,315,483	42
United States deposits	375,735	56
Deposits of United States disbursing officers	9,692	37
Due to National banks	1,302,375	41
Due to State banks and bankers	295,927	28
Notes and bills re-discounted	294,965	76
Bills payable	87,256	31
	94,133,856	20

Number of banks, 159.

Abstract *of the reports made to the Comptroller of the Currency, showing the condition of the National Banks in the city of Philadelphia, at the close of business on Friday, the 2d day of October,* 1874.

RESOURCES.

Loans and discounts	$47,893,261	13
Overdrafts	21,519	97
United States bonds, to secure circulation	13,668,200	00
United States bonds, to secure deposits	225,000	00
United States bonds on hand	321,300	00
Other stocks, bonds and mortgages	$1,573,250	81
Due from redeeming and reserve agents	4,935,566	48
Due from other National banks	2,595,314	03
Due from State banks and bankers	669,605	20
Real estate, furniture and fixtures	2,328,346	88
Current expenses	556,196	81
Premiums paid	188,139	21
Checks and other cash items	388,918	56
Exchanges for clearing-house	6,723,983	25
Bills of other National banks	1,229,638	00
Bills of State banks	819	00

Fractional currency	$134,880 55
Specie	372,049 67
Legal tender notes	5,376,459 00
United States certificates of deposit for legal tender notes,	3,790,000 00
Deposit with United States Treasurer	698,968 00
	93,691,416 55

LIABILITIES.

Capital stock paid in	$16,935,000 00
Surplus fund	7,169,154 13
Undivided profits	1,922,460 62
National bank notes outstanding	11,722,725 00
State bank notes outstanding	42,491 00
Dividends unpaid	47,654 28
Individual deposits	46,734,450 55
United States deposits	150,792 51
Due to National banks	6,749,007 16
Due to State banks and bankers	2,215,049 26
Bills payable	2,632 04
	93,691,416 55

Number of banks, 29.

ABSTRACT *of reports made to the Comptroller of the Currency, showing the condition of the National Banks in the city of Pittsburg, at the close of business on Friday, the 2d day of October,* 1874.

RESOURCES.

Loans and discounts	$16,872,008 51
Overdrafts	107,153 99
United States bonds to secure circulation	7,558,500 00
United States bonds to secure deposits	50,000 00
United States bonds on hand	378,000 00
Other stocks, bonds and mortgages	123,930 60
Due from redeeming and reserve agents	1,549,885 18
Due from other National banks	572,065 53
Due from State banks and bankers	179,317 82
Real estate, furniture and fixtures	879,338 61
Current expenses	196,633 06
Premiums paid	62,361 22
Checks and other cash items	186,789 05

Exchanges for clearing-house	$601,507	83
Bills of other National banks	479,749	00
Fractional currency	37,725	84
Specie	51,327	55
Legal tender notes	24,125	08
United States certificates of deposit for legal tender notes,	100,000	00
Deposit with United States Treasurer	443,750	00
	32,842,551	79

LIABILITIES.

Capital stock paid in	$9,000,000	00
Surplus fund	3,141,704	48
Undivided profits	683,422	38
National bank notes outstanding	6,508,968	00
State bank notes outstanding	16,524	00
Dividends unpaid	40,849	25
Individual deposits	11,103,088	06
United States deposits	45,000	00
Due to National banks	1,042,134	13
Due to State banks and bankers	1,248,533	81
Notes and bills re-discounted	12,327	68
	32,842,551	79

Number of banks, 16.

OUR FINANCIAL DIFFICULTIES.

A REMEDY, BY GEORGE RHEY, ESQ., OF MILLWOOD, WESTMORELAND COUNTY, PA

A nation is prosperous when her people are amply supplied, by their own industry, with those things essential to the enjoyment of life, and increases in wealth in proportion to the amount received for the surplus produce of their labor. A sufficient supply of money of uniform value is a necessary aid. It is the duty of government to supply this. Gold and silver give the uniformity required. Often in the history of the world, governments have found it necessary to substitute paper for gold and silver. This was the case with our Government during its conflict with the Southern Confederacy. The business of our people became adapted to the condition incident to the suspension of specie payments. The value of property of every description was largely enhanced, the expense of living and the wages of labor advanced proportionately ; public improvements of the most extensive character were projected and completed, manufactures rapidly increased and the area devoted to agriculture was widely extended. Suddenly, over one year since, this activity ceased. The interval has been devoted to idleness and gloomy forebodings. The men who, by their superior knowledge and enterprise gave vitality to the business operations of the country are powerless. Their money and their credit are exhausted. The timid owners of the money of the nation are frightened and hoard it, or invest it in government bonds, mortgages, or other convertible securities. Laboring people are idle in immense numbers. To resume specie payments now would increase the financial embarrassment. It would diminish the volume of money, reduce values ruinously, increase the disposition to hoard, prostrate the debtor class entirely, and stop all industries until the financial revolution would be fully accomplished.

The only remedy for our temporal ills is to put the people to work producing something which will sell for more than they spend.

We have everything in readiness to do this instantly. We have at least 8,000,000 able-bodied men in this country to-day possessing the knowledge, skill, physical ability and energy required to perform properly the duties of all their varied positions. We have a boundless expanse of land ready for cultivation, of unsurpassed fertility, capable of producing every article required to sustain human life largely in excess of our wants. We have mineral resources excelling in quantity and quality any other portion of this world. We have the appliances and machinery in existence and the knowledge and skill to put them into immediate use in the fabrication of every article needful in life. We have navigable rivers, canals and railroads penetrating every portion of this country, affording our people unequalled facilities for inter-communication and the interchange of commodities. We have a merchant marine navigating every ocean and sea, distributing to every nation on the earth's surface the products of our industry and skill.

These resources should make us prosperous and happy. We are not so. No branch of productive industry is properly remunerative. The only relief for this depression is an increase in the supply of money sufficient to arrest the shrinkage of values, destroy the incentive to hoard, reduce the value of money, and start the idle people to work. Gold and silver cannot be increased sufficiently to do this. Any increase in the amount of paper money unless it is based on the credit of our National Government, and its redemption in gold is definitely provided for, would only increase the financial ills which now afflict us.

Our National debt is about $2,000,000,000. The annual interest on this debt is about $100,000,000.

Our National banks are based on government bonds. Whatever credit our national bank-notes enjoy is afforded by the liberality of our national government for their ultimate redemption. The bankers receive from the borrowers for the use of these notes 8 to 12 per cent. each year in addition to the interest received from the government on the hypothecated bonds. This is a most onerous and needless tax on the productive industry of the country. No public benefit results from it. The bankers alone are advantaged. Why should the government delegate its duty, to furnish money to the National banks? It cannot be sustained by sound reason. Let the government at once authorize the issue of greenbacks enough to pay off, as rapidly as possible, our national debt, and provide for the redemption in gold of $100,000,000 of the amount each year and its immediate destruction. The adoption of this measure would place in the hands of the owners of our government bonds and the greenbacks now circulating about $2,000,000,000 of money of unquestioned value.

The redemption in gold of $100,000,000 of the amount annually, and its immediate destruction would establish and maintain the credit of this issue equal to gold, and in twenty years our frightful national debt would be paid off without costing more than would be required, in that time, to discharge the interest and leave the debt perpetuated. Our national banks would be undisturbed in the enjoyment of their banking privileges. Greenbacks would replace national bank notes. This issue would be circulated as rapidly as its owners could find safe and profitable investment for it.

It is reasonable to suppose the great intrinsic and prospective value of our real estate, the flattering promise of profit presented by our mining, manufacturing, railroad navigation and mercantile enterprises would speedily absorb it all. If this supposition should be realized, new life and activity would be quickly imparted to our depressed industries and our idle people would be employed and made prosperous and happy.

This measure will restore specie payments so gradually and reduce values to that point which is absolutely necessary to place the business of our country upon a permanent basis, so imperceptibly as to avoid the general bankruptcy which is now impending over us.

My proposition assumes the inability of our government to maintain its credit without affording some measure of relief to the people.

This is the conviction of the majority in Congress, manifested by the adoption of the measure removing all restriction to the increase of our national banks. Will that measure afford the relief we require? I think not. The men who have money in the country will not remove it from its present hiding places, and its present employment, to invest it in new bank stocks. Will we wait until our bankruptcy is flaunted to the world? I hope not.

GLASS-WORKS OF PENNSYLVANIA.

34 Clinton Place,
New York, *December* 18, 1874.

His Excellency Governor J. F. Hartranft,

Dear Sir :—Will you have the kindness to let me know the number of glass-works in the State of Pennsylvania, their names and the capital which each one represents.

Respectfully yours,
AUG. WEYER.

Bureau of Statistics,
Harrisburg, *December* 28, 1874.

Aug. Weyer, Esq.,

Dear Sir :—Governor Hartranft has referred your letter of December 18th to my department for answer. Your questions, though few in number, are difficult to answer.

The glass manufacturers of Pennsylvania are a sort of close corporation, and I have never been able to procure returns from them which would enable me to answer the amount of capital that any one of them represents. By the last census there were in Pennsylvania fifty-six establishments, representing a capital of $2,269,916.

The annual product of the preceding year appears to have been $8,412,705. These tabularized are distributed amongst the several counties of the State in the following manner:

COUNTIES.	Establishments.	Capital.	Product.
Allegheny	32	$460,800	$5,832,492
Centre	1	45,000	129,000
Fayette	4	198,000	299,190
Lawrence	1	50,000	125,000
Montgomery	1	100,000	80,000
Philadelphia	15	1,256,116	1,722,023
Tioga	2	80,000	135,000
Total	56	2,189,916	8,322,705

In regard to Allegheny county the report is certainly short. I have before me a list of 41 glass manufactories, instead of 32 as named in the report.

A book purporting to give the manufactures of Pennsylvania, puts down Pittsburg capital invested in glass, $12,000,000 ; value of products, $10,000,000 ; this, however, is a palpable exaggeration. The same book puts down Philadelphia glass production nearly the same as in the above table.

The census returns I suppose to be fully one-third below the aggregate production of our State, which would give a product as follows :

Establishments, 74 ; capital, $3,284,874 : product, $12,484,057.

I could give you the list of the glass houses of Pittsburg, but neither the capital or product in any detail of any one of them.

These establishments cover every variety of window glass, bottles, phials, flint and crystal glass in all forms, and at least two establishments for the manufacture of stained glass for churches and ornamental purposes. This is about as full as the returns in my office enables me to give.

Respectfully yours,
THOS. J. BIGHAM,
Commissioner.

COAL PRODUCTION OF PENNSYLVANIA, 1874.

I. ANTHRACITE.

	Tons.	
Schuylkill	6,714,074	
Lehigh	4,712,280	
Wyoming	10,204,764	
Total anthracite		21,631,118

II. SEMI-BITUMINOUS.

Fall Brook coal company	258,192	
Morris Run ... do	249,438	
Blossburg ... do	255,086	
M'Intyre ... do	138,907	
Towanda ... do	215,572	
Fall Creek ... do	21,281	
Schrader ... do	100,219	
Snow Shoe region	63,540	
Clearfield region	703,170	
Broad Top Mountain region	298,056	
Total semi-bituminous		2,303 461

III. BITUMINOUS.

Allegheny Mountain region	208,094	
Penn and Westmoreland gas coal	911,371	
Pennsylvania railroad (west)	533,777	
South-Western Pennsylvania railroad	7,880	
Western Pennsylvania railroad	194,008	
Pittsburg and Connellsville railroad	403,976	
Monongahela navigation company	2,196,153	
Little Saw Mill Run	89,676	
Pittsburg, Cincinnati and St. Louis, (Pan-Handle,)	604,258	
Pittsburg and Castle Shannon railroad	122,925	
Pittsburg and Erie railroad	270,448	
Pittsburg, Fort Wayne and Chicago railroad	194,673	
Allegheny Valley railroad	240,165	
Pittsburg, Charleston and West Virginia railroad,	30,096	
Pittsburg and Cleveland railroad	291,721	

Keeling & Co., Pittsburg	147,546	
Wettingal & Gormley	11,877	
J. W. Carlin & Co	3,817	
Other local consumption in Pittsburg not carried by railroads	*50,000	
Johnstown, used in iron works	*200,000	
Philadelphia and Erie railroad	*200,000	
Mined from country pits and for manufacturing, such as furnaces and salt works, and not carried by railroads	300,000	
Used by railroads and not included in their reports of coal freights above	500,000	
Total bituminous		7,712,461

IV. MERCER COUNTY BLOCK COAL.

Lawrence railroad, New Castle and Beaver railroad, Jamestown and Franklin railroad, Shenango and Allegheny railroad, and used locally in iron manufacture, not in above report	*500,000	
Total Anthracite		21,631,118
Semi-bituminous		2,303,461
Bituminous		7,712,461
Block		500,000
Total coal production of Pennsylvania		32,147,040

V. BITUMINOUS—OTHER STATES.

The bituminous coal produced elsewhere may be summed up thus:

Cumberland (Md.) region	2,410,895
St Louis region	725,369
Tennessee region	81,948
Kanawha region	140,217
Alabama region	48,319
Chicago region	784,950
Pomeroy, Cannelton, Hocking Valley and various other places, estimated	1,000,000
	5,191,698
Total coke production in Pennsylvania	1,624,379
	6,816,077

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*Estimated.

THE ANTHRACITE PRODUCTION IN 1874.

[From the Engineering and Mining Journal.]

The production of anthracite coal this year has fallen but little short of that of last years', notwithstanding the great depression which existed in the iron and manufacturing trades that usually consume so large a portion of anthracite. The Schuylkill region suffered probably as much as the Wyoming, and the report of the Philadelphia and Reading railroad shows the falling off there to be but 3 per cent. The quantity of coal mined on the line of the Lehigh Valley railroad and that mined by the Pennsylvania coal company was about 100,000 tons more in each case than in the previous year. The Central railroad of New Jersey lost in tonnage about 107,000 tons ; the Delaware, Lackawanna and Western railway the most, or 547,000 tons. The Delaware and Hudson canal company lost 355,000 tons. The Philadelphia and Reading lost about 3 per cent., or there were probably, in all, 1,000,000 tons less mined in 1874 than in 1873, which would make the production in 1873, 22,535,266 tons.

The quantity of coal mined on each of the several transporting companies' lines in 1874 was as follows :

THE PRODUCTION OF ANTHRACITE COAL FOR THE YEAR ENDING DECEMBER 31, 1874.

Tons of 2,240 lbs.

Wyoming Region.	Tons.
Delaware and Hudson canal company	2,399,417
Delaware, Lackawanna and Western railroad	2,502,769
Pennsylvania coal company	1,338,663
Lehigh Valley railroad	940,987
Pennsylvania and New York railroad	57,596
Central railroad of New Jersey	1,519,590
Pennsylvania canal	321,374
Lackawanna and Bloomsburg, south	432,646
Sold and used at the mines	691,722
Total output of Wyoming region	10,204,764
Lehigh Region.	
Lehigh Valley railroad	3,152,651
Central railroad of New Jersey	1,210,662
Danville, Hazleton and W. B. R. R.	40,687
Sold and used at the mines	308,280
Total output of Lehigh region	4,712,280

Schuylkill Region.

	Tons.
Philadelphia and Reading railroad	5,370,300
Shamokin and Lykens Valley	904,536
Sold and used at the mines	439,238
Total output of Schuylkill region	6,714,074
Sullivan Region.	
Sullivan and Erie railroad	33,896
Sold and used at the mines	2,372
Total output of Sullivan region	36,268
Total production of all the regions	21,667,386

STATEMENT *of coal and coke tonnage forwarded by the Pennsylvania railroad, during* 1874.

FROM	Anthracite. Tons, 2,000 ℔s.	Bituminous. Tons, 2,000 ℔s.	Coke. Tons, 2,000 ℔s.
Anthracite	791,667		
Huntingdon and Broad Top		164,543	
Cumberland		74,332	
Snow Shoe		63,540	
Tyrone and Clearfield		644,680	849
Allegheny		208,094	118
West Pennsylvania railroad		194,008	46,169
South West Penn'a railroad		7,880	430,740
Gas coal		911,371	41,600
Pittsburg coal		445,532	68,478
Danville, Hazleton and Wilkes-barre railroad	105,970	875	
Lewisburg, Centre and Spruce Creek railroad	8,629	262	
	906,266	2,715,117	587,954

GEORGE M. TAYLOR,
Auditor.

Statement of coal tonnage forwarded by the Pennsylvania canal, during 1874.

Wyoming region	321,294	gross tons.
Shamokin region	51,121	"
Lykens Valley region	73,096	"
Allegheny and Broad Top	12,723	"
	458,234	"

W. CARLISLE, JR.,
Auditor.

BROAD TOP SEMI-BITUMINOUS COAL TRADE.

STATEMENT *exhibiting the amount of coal mined and sent to market in* 1874, *from the collieries of the Broad Top Semi-Bituminous coal region, with present facilities and estimated capacity for* 1875, *furnished by John Fulton, Mining Engineer.*

NAME OF COLLIERY.	NAME OF PROPRIETOR.	NAME OF OPERATOR.	Tons net sent to market in 1874,	No. of miners at colliery........	Number of other workmen......	Number of miners' houses...	Galler's or rooms in work'g order	Average capacity in tons per day,	Estimated value of colliery improvements....
1. Coalmont	Chandler & Peabody				2	11	12	40	$80,000
2. Cumberland	H. and B. T. R. R. Co	J. Whitehead & Co	6,207.3			5	20	70	12,000
3. Crawford	..do..........do	..do..........do	28.1			8	10	25	15,000
4. Powelton	R. H. Powel & Co	R. H. Powel & Co	37,650	60	25	50	100	260	150,000
5. Barnet	Orbison, Dorris & Co	R. U. Jacobs & Co	22,438.2	40	12	10	25	80	30,000
6. Dudley slope	Wood & Bacon	J. M. Bacon	855.1			23	15	25	40,000
7. Blair's	David Blair	..do.....do	10,125.2	10	3	13	20	50	25,000
8. Howe	..do.....do	..do.....do	9,790.2	16	2		15	50	10,000
9. Moredale	Semi-Anthracite Co	Reakirt, Bro. & Co	20,563	35	3	36	30	100	20,000
10. Fishers	Fishers & Miller	Fishers & Miller	18,077.1	37	3	17	25	125	25,000
11. Carbon	Rathmell Wilson	J. F. Mears	18,157.3	47	4	6	27	150	25,000
12. Cook	Broad Top Improvement Co	P. Ammerman	2,670.2			23	10	30	20,000
13. Mount Equity	Riddlesburg C. and I. Co	Kemble C. and I. Co	34,239.2	38	18	17	33	130	30,000
14. Duvall shaft	Rathmell Wilson	..do..........do			2	37	15	50	50,000
15. Cunard	R. B. Wigton	R. B. Wighton	15,131.2	44	8	19	29	160	50,000
16. Mount Eagle	Reed, Wilson & Co	W. H. Piper	26,645.1	48	9	13	24	130	20,000
17. Scott shaft	Hon. John Scott	William Scott				11	10	50	45,000
18. Edge Hill	Rathmell Wilson	Dr. Jenkins	490.1	2		24	50	200	40,000
19. Delaware	..do..........do	..do....do					15	80	15,000
20. Alexis	Six Mile Run C. Co	A. Gleason	2,222.2			15	20	100	40,000
Cumberland coal over H. and B. T. R. R.			72,763.1						
Totals			298,056	377	91	338	505	1,905	742,000

REPORT OF JOHN FULTON, M. E.,

ON THE COKING OF BROAD TOP COAL AND ITS CHEAPNESS IN COMPARISON WITH ANTHRACITE IN THE METALLURGY OF IRON.

The experience gathered in the past five years in making coke and in its use in blast furnaces, furnish much interesting data in regard to this very important industry.

Iron making at the Kemble furnaces began in 1869. The furnaces ran for four years with coke as fuel, made from the coal of the region as it came from the mines and coked in the bee-hive ovens.

The result of these four years' experience was not satisfactory. With good iron ores—the Juniata fossil ores, with coke well made from good clean coal—yet a pig iron was produced quite variable in character, and seldom attaining a grade which could reasonably be looked for.

Careful investigation, prior to the erection of these furnaces, eliminated the fact that the ores of the region would, with proper treatment in the furnaces, yield a superior pig iron. Hence, during the first three years, efforts were directed to procuring a good, pure coal, and in having it carefully mined, excluding all the impurities that could be reached in this way. Still, the working of the furnace was not as good as expected. The metal could be sold in a time of demand, but in a depressed market it was difficult to dispose of.

The furnace men charged the miners with sending out dirty coal, and the latter retorted that the former did not coke the coal properly, or failed in its right application in the furnace.

The very fact that the Kemble company were procuring a very superior clean coal for coking, prolonged the discovery of the real difficulty. Like all other discoveries it seemed so plain when once reached that the wonder was that the thought did not come to light sooner. *They required a purer and denser coke*

A year ago a coal washing apparatus was put in operation crushing the coal, thus disconnecting the slates and sulphur pyrites from it, and separating them in a further process of washing.

The coke made from this *washed coal* is dense, lustrous and sonorous. Its use in the furnace at once produced results both startling and gratifying.

The pig metal produced is totally unlike the former yield. It is open, granular, gray, soft metal, No. 2 foundry. The product of the unwashed coke was silvery, mottled, fine-grained, and tolerably hard.

Samples of the two qualities of pig metal present the most decisive argument on this question.

Thirty or forty pieces of this improved coke were submitted for thorough test and analysis at the Cambria iron works, at Johnstown, Pa., with the following results:

Carbon	89.28
Ash	9.66
Sulphur	1.06
	100.00

It was added, verbally, that the Broad Top coke, from washed coal, *"was equal to the best, and better than most of the Connellsville coke."*

It is not designed by this comparison to detract in the least from the well established good character of the Connellsville coke, but to respectfully, yet firmly, insist on the fact that, by the recent improvement in cleansing the Broad Top coal, we can make fully as good a quality of coke as the Connellsville.

In Mr. Britton's valuable circular to furnace proprietors, published in the "Engineering and Mining Journal" of June last, an analysis of a sample of Connellsville coke, composed of forty-nine different pieces, is given *"as a standard whereby the value of other cokes may be ascertained."*

Carbon	87.456
Ash	11.332
Sulphur	.693
Phosphoric acid	.029
Moisture	.490
	100.00

This position is further strengthened by the actual work in the Kemble furnaces at Riddlesburg.

The use of this purified coke in one furnace, fourteen by sixty feet, increased its yield from one hundred and forty tons to one hundred and eighty tons of pig iron a week, and permitting the blast pressure to be increased from three and a half to five and a half pounds per square inch.

The improvement in the *quality* of the pig metal has been carefully estimated at four dollars per ton.

A visit to these furnaces, and a brief examination of the unwashed coke pig iron with the washed coke pig iron, will convince any reasonable mind that a very decided improvement has been made in this important fuel.

The cost of Broad Top coke is a very important question in the present discussions of the furnace proprietors. Mr. Lauder, superintendent of the

Kemble furnaces, furnishes the following estimate of washed coke delivered in railroad cars:

$1\frac{6}{10}$ tons of coal, at $1 10	$1 76
Washing—net	13
Coking	60
Loading in railroad cars	15

One and three-quarters tons of coke smelt one ton of pig iron in the Kemble furnaces. This, at two dollars and forty-nine cents per ton, gives four dollars and thirty-six cents per ton of pig metal.

On this question of a cheap supply of excellent furnace fuel there appears to exist some want of correct information, or rather the vigorous thinking minds of the eastern furnace proprietors have not yet reached out of the anthracite circle of their operations.

In the discussion of this question, at the Philadelphia meeting of pig iron manufacturers, November 24th, Mr. Coleman said: "The trade of Mississippi Valley is in the hands of the bituminous pig iron men. The only way was to blow out, and thus force the coal men down. They would come down if the iron men stopped buying coal. It would not be long before men would find out good coke somewhere else than at Connellsville, where it could be transported cheaply to the east."

The whole scope of these pungent remarks foreshadow a movement that has been forced forward by the present condition of the pig iron manufacture—a searching analysis of the cost of production, with a view to its reduction in a permanent and reliable manner. This can be accomplished by many of the eastern furnaces in the zone between the line of true economy in the anthracite circle and the Broad Top coal field.

That a movement must take place in many of the anthracite furnaces is becoming more and more evident, as coke is manifesting its leading claim as destined to become the fuel in the metallurgy of iron.

Mr. Coleman's view of this is certainly far-seeing; but it will only be repeating a period in the previous history of the pig iron manufacture when charcoal fuel had to be abandoned, owing to its increasing cost, and coal and coke used in its stead.

How soon this new movement from anthracite coal to coke will be initiated, cannot now be told. It is, however, only a question of time.

The excellent but limited supply (four hundred and seventy-two square miles) of anthracite coal will be reserved for its manifest purpose—domestic use—by an ever-widening circle of demand, with a somewhat increased price, and the present misapplication of it stopped—just as the former slashing down of the primeval forest was arrested when the charcoal period closed.

It requires one and three-quarters to two and one-quarter tons of anthracite coal to smelt one ton of pig iron, indicating an average of two tons of this coal to one ton of pig metal.

The cost of this coal is a very variable factor—its present average at the furnaces indicated previously as being outside of the economic circle of anthracite operations may be taken at five dollars per ton costing ten dollars for fuel for smelting one ton of pig iron.

On the other hand we have Broad Top coke costing four dollars and thirty-six cents per ton of pig iron—no appreciable difference in the fuels *but a difference in cost, in favor of coke, of five dollar*s *and sixty-four cents* to go over to freights eastward.

Another fact appears very clear in this connection—the time is approaching when many of the anthracite pig iron manufacturers will have to cast about for coke.

How to do this so as to receive a cheap and thoroughly pure coke is a very important consideration. Evidently, to procure coke at a minimum cost, and to secure an uninterrupted supply, the furnace owners will be compelled to control and direct the whole operations of mining, washing and coking the coal.

They will, therefore, require to purchase the coal lands, and in such extent as to afford an ample supply for years to come.

The *quality* of the coal for *coke-making* in such purchases is of *prime importance.*

Many seams of coal of good quality, and well adapted for many purposes, are either totally or partially unfit for coking.

From the past five years' experience in coking the Broad Top coals, it has been shown that they are peculiarly suited for making a very superior coke.

The Broad Top coal-field, of eighty square miles, stands out eastward from the Alleghanies, inviting development by its geographical position *and superior type of coking coal.* This new industry, furnishing in its own field the indisputable testimony *that its coal, carefully mined and washed, produces a coke that is not surpassed in purity or calorific power by any other now manufactured.*

JOHN FULTON,
Mining Engineer.

Saxton, Bedford county, Pa.,
December 1, 1874.

CUMBERLAND COAL TRADE.

COMPILED *from official sources in the office of the Cumberland and Pennsylvania railroad company, Mount Savage, Maryland.*

TABLE NO. 1. DETAILS OF PRODUCTION OF 1874.

NAME OF COMPANY OR MINE.	1874.					COMPARED WITH 1873.	
	To B. & O. R. R.	To C. & O. Cl.	To Pa. R. R.	Local.	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Consolidation coal company	264, 928	141, 313	34, 392	26, 925	467, 558		80, 926
George's Creek coal and iron company	256, 438	38, 788		1, 052	296, 278		5, 986
Maryland coal company	106, 946	155, 616	256	2, 726	265, 544		38, 580
New Central coal company	147, 523	95, 502		400	243, 425		41, 721
American coal company	65, 777	122, 668	517		188, 962		76, 587
Hampshire and Baltimore company, (Midland,)	40	10, 041		100			
Do. Do. (National,)	8, 404	43, 034	11	254			
Do. Do. (Va. Mines,)	109, 094			100	171, 078		26, 849
Borden mining company	10, 336	111, 357	32, 421	4, 303	158, 417		20, 043
Atlantic and George's Creek coal company	96, 224	12, 534		3, 755	112, 513		2, 558
Franklin coal company	99, 347			75	99, 422		11, 560
George's Creek mining company	82, 540			50	82, 590	439	
Swanton mining company	81, 440			298	81, 738	27, 215	
Potomac coal company	76, 563			220	76, 783		3, 367
Piedmont coal and iron company	57, 932		71	300	58, 306		9, 523
Virginia coal and iron company	54, 911			141	55, 052		22, 530
Blaen Avon coal company	271	36, 211		18	36, 500	23, 948	
New Reading coal company	14, 289				14, 289	12, 952	
North Branch coal company	2, 440				2, 440	2, 440	
	1, 535, 443	767, 064	67, 671	40, 717	2, 410, 895	67, 024	340, 230 67, 024
						Decrease. .	273, 206

RECAPITULATION.

FROM	To B. & O. R. R.	To C. & O. Cl.	To Pa. R. R.	Local.	Total.
Cumberland and Pennsylvania railroad	1,259,771	631,882	67,216	36,033	1,994,902
Cumberland and branch road	109,227	135,182	455	4,443	249,307
Hampshire and Baltimore company, (West Virginia.)	109,094	....	....	100	109,194
Virginia C. & I. company, and N. B. coal company	57,351	....	....	141	57,492
	1,535,443	767,064	67,671	40,717	2,410,895

62,972 tons gas coal shipped by canal during year.

STATISTICS OF IRON AND COAL TRADES OF PITTSBURG FOR 1874.

[From the "American Manufacturer."]

We give below tables showing the actual amount of the various articles stated that have entered into consumption in the city of Pittsburg and vicinity during the past year. It is not as complete as we desire, but it is correct as far as it goes, the figures, unless otherwise stated, being *Official*, furnished us by the officers of the roads. We have carefully avoided duplications, as well as including iron, ore, &c., that was received in the city and not intended for consumption here. For example, the Cambria Iron company receive large amounts of pig metal over the Cleveland and Pittsburg road, which is re-shipped to Johnstown. This is not included in our tables. We should also state that the coal and coke via slackwater is not all nor the largest part of it consumed here, but we have no means of separating it.

BITUMINOUS COAL, IN TONS OF 2,000 POUNDS.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allegheny Valley	12,728	18,993½	17,476¼	23,763½	21,661¾	16,864½	16,426¼	19,057¾	27,338¼	19,162¾	19,498¼	16,355¼	229,326½
Castle Shannon	14,613¼	12,240	13,580	15,072¾	14,055½	12,502¾	8,320¾	3,976¾	6,383½	14,088½	12,216¾	9,177¼	136,227¾
Connellsville	16,740	15,518	15,048	16,478	14,268	17,428	8,796	14,982	20,602	18,156	14,627	12,012	184,655
Pennsylvania railroad	27,529¼	28,049¼	29,160½	27,760½	37,310¾	44,446¼	39,897½	44,437½	50,540	39,575	24,261¾	24,576½	417,544¾
Pittsburg, Charleston and Virginia	532	835	1,518	1,497	1,556	1,837	2,855	3,069	5,259	5,249	2,519	3,361	375,000
Pittsburg, Cincinnati and St. Louis	....	....	....	....	....	....	....	....	....	....	....	....	....
Saw Mill Run railroad	14,981½	16,630	13,887½	11,402½	4,452	3,249½	4,359	....	....	2,710	7,889½	8,076	87,637½
West Penn railroad	9,200¾	10,130½	9,909	9,359¼	8,023¾	5,726¼	7,484	9,237¾	10,037¾	10,364¾	8,413¼	3,291¾	101,178¾
Monongahela slack water	355,250½	351,507½	376,055¾	379,490¾	213,434½	64,413¾	59,086¼	35,792¼	42,168½	54,157½	208,502¼	363,644¾	2,503,504½
Not otherwise reported, (estimate)	....	....	....	....	....	....	....	....	....	....	....	....	173,291
Total	....	....	....	....	....	....	....	....	....	....	....	....	4,208,365¾

COKE IN TONS OF 2,000 POUNDS

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Connellsville railroad	8,100	7,548	8,508	7,969	7,128	5,880	6,492	7,164	6,792	5,220	5,532	6,408	82,741
Pennsylvania railroad	36,867	29,787	48,620	43,810	39,000½	40,084	35,467½	45,109½	47,288	56,294	45,562¾	46,383	514,272¾
West Penn railroad	3,477	3,392¾	5,148½	6,199¼	6,873	3,304	910	887	1,181	1,568	1,156¾	2,619½	36,718¾
Monongahela slack water													38,790
Not otherwise reported, estimated													70,000
Total													742,522½

PIG METAL IN TONS OF 2,000 POUNDS

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allegheny Valley railroad	2,218	2,245½	2,489	1,164¼	2,339	2,477½	2,787¾	731½	1,582	1,418½	1,225½	986¾	21,665¾
Cleveland and Pittsburg railroad,	408½	193½	526¾	1,870½	913¾	788½	2,455½	1,150¼	1,225½	3,859¼	1,859¾	3,300¼	18,540
Connellsville railroad	1,811	1,290	1,056	1,722	2,318	2,102	2,118	1,266	1,827	1,888	1,373	745	19,516
Pennsylvania railroad	4,258¼	2,199¼	2,042¾	3,444¼	1,746¾	2,219¼	1,834¾	1,612¼	1,621¾	1,331¾	802½	1,192½	24,306
Pittsburg, Cincinnati and St. Louis						65		817			11		893
Pittsburg, Ft. Wayne and Chicago	14,469	11,911	6,439	1,806	7,451	14,985	14,665	12,728	11,804	13,050	6,299	8,020	123,605
West Penn railroad													
Allegheny station, (C. & P. R. R.)		141¼	621	480¾		32¼	345¼				300¾		1,921¼
Allegheny sta., (P., F. W. & C. R. R.	2,983¼	1,689½	952½	1,610¼	1,950½	2,041¼	3,379¼	952½	2,415½	1,043¼	442¼	295¾	20,253¾
Manchester station, (C. & P. R. R.)	100	130	30	410	10	50	70	20	70	10	90	40	1,030
River													24,621½
Not otherwise reported													150,000
Total													406,361¼

MUCK AND PUDDLE BAR, BLOOMS AND BILLETS, IN TONS OF 2,000 POUNDS.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec	Total.
Allegheny Valley Railroad	......	......	......	......	......	......	......	......	......	......	......	......	......
Pennsylvania railroad, (blooms)	123	134½	61	94½	104	93½	142	......	123	39¾	45¼	97¼	1,057¾
Connellsville railroad, (muck)	43	100	110	160	200	100	250	90	33	12	80	158	1,335
Pittsburg, Cincinnati and St. Louis	......	......	......	......	......	......	......	......	......	......	......	......	......
Pittsburg, Fort Wayne and Chicago	......	......	......	......	......	......	......	......	......	......	......	......	......
Allegheny Station P., Ft. W. & C. R. R. (muck bar)	......	......	......	......	......	......	......	49¾	470½	257½	......	......	777¾
Allegheny Station P., F. W. & C. R. R. (blooms)	......	......	......	......	......	......	......	......	......	......	......	......	......
Total	......	......	......	......	......	......	......	......	......	......	......	......	3,170½

IRON ORE IN TONS OF 2,000 POUNDS.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allegheny Valley	110	241¼	10	112¾	560	127¼	344½	......	......	210	160	80	1,955¾
Cleveland and Pittsburg, (City)	9,234	6,482	8,740	10,503	3,461	9,267	10,524	11,126	6,020	7,170	4,698	5,085	92,310
Cleveland and Pittsburg, (Allegheny Station)	2,599½	3,552¼	5,659¾	4,786¾	3,907¼	4,712½	4,435¾	4,467¾	3,503½	3,269¾	3,427¾	3,591¼	47,904
Cleveland and Pittsburg, (Manchester)	3,432¾	7,177¾	8,679¾	8,217¾	5,738¾	6,796¼	5,391¼	5,374¾	1,377¾	1,439¾	436¾	2,643¾	56,707
Connellsville	600	744	706	935	412	120	480	1,030	1,430	340	490	......	7,287
Pennsylvania railroad	......	......	......	52	130	......	20	10	......	......	200	......	412
Pittsburg, Cincinnati and St. Louis	......	......	......	......	......	......	......	......	......	......	......	......	......
Pittsburg, Ft. Wayne and Chicago, (Allegheny,)	......	587¼	1,367¾	1,152¾	754¼	397¼	439½	480½	4,220	1,043¼	......	......	10,442¾
Pittsburg, Ft. Wayne and Chicago, (City)	......	731	1,451	1,451	656	817	2,150	7,519	5,085	2,236	785	731	23,612
River	......	......	......	......	......	......	......	......	......	......	......	......	30,000
Total	......	......	......	......	......	......	......	......	......	......	......	......	270,630½

YIELD OF MINES AND FURNACES OF THE LAKE SUPERIOR DISTRICT.

We copy from the *Mining Journal* the following statement, in gross tons, of the aggregate yield of the mines and blast furnaces of the Lake Superior iron district from 1856 to 1874, inclusive, together with the value of the same :

Year.	Iron ore.	Pig iron.	Ore and pig iron.	Value.
1856	7,000	....	7,000	$28,000
1857	21,000	....	21,000	63,000
1858	31,035	1,629	32,664	249,202
1859	65,679	7,258	72,937	575,529
1860	116,908	5,660	122,568	736,496
1861	45,430	7,970	53,400	419,501
1862	115,721	8,590	124,311	984,977
1863	185,257	9,813	195,070	1,416,935
1864	235,123	13,832	248,955	1,867,215
1865	196,256	12,283	208,539	1,590,430
1866	296,972	18,537	315,409	2,405,960
1867	466,076	30,911	496,987	3,475,820
1868	507,813	38,246	546,059	3,992,413
1869	633,238	39,003	672,241	4,968,435
1870	856,471	49,298	905,769	6,300,170
1871	813,379	51,225	864,604	6,115,895
1872	952,055	63,195	1,015,250	9,188,055
1873	1,167,379	71,507	1,238,886	11,395,887
1874	935,488	90,494	1,025,982	7,592,811
Total	7,648,280	519,351	8,167,631	63,366,731

OFFICIAL OIL RETURNS.

Table *of returns from parties engaged in the storage and transportation of petroleum oil for the quarter ending September* 30, 1874, *and December* 31, 1874, *made pursuant to act of* 15*th May, A. D.* 1874, *to the Bureau of Statistics of the State of Pennsylvania.*

COMPANIES.	POST OFFICE.	Quarter ending Sept. 30—bar'ls, (42 gallons.)	Quarter ending Dec. 31—barl's. (42 gallons.)
American transfer company	St. Petersburg	135,939.61	138,832.92
Antwerp pipe company	St. Petersburg	116,848.18	
Church Run pipe company	Titusville	9,562.68	6,288.29
Charley Run pipe company	Oil City	8,352.00	3,706.00
Cherry Tree Run pipe line			15,278.46
Delaware River storage company	112 Walnut street, Philadelphia,	*126,986.00	33,091.00
Franklin pipe line	Franklin	9,169.39	9,801.16
Grant pipe company	Parker	154,087.24	137,684.73
Karns pipe line	Parker	253,572.41	186,006.65
Milton pipe line			10,367.65
Munhall, John & Co.	Oil City	52,471.00	
New York and Allegheny oil company	Tidioute	19,911.79	
New York pipe company	Titusville	41,093.01	34,810.79
Octave oil company	Titusville	17,629.92	
Oil City pipe company	St. Petersburg	78,885.86	74,285.49
Pennsylvania transportation company	Titusville	145,979.03	137,858.98
Prentice, F. & Co	Coal City	23,340.00	4,682.00
Rochester and Oleopolis	Oil City	33,856.33	23,823.87
Relief pipe line company	Millerstown	198,189.46	250,007.62
Shaffer Run pipe company	Oil City	37,712.00	27,555.00
Sage Run pipe line	Oil City	16,992.33	5,749.26
Sandy pipe line			36,428.26
Smith's Ferry and Island Run oil and transportation company	Beaver county	10,433.13	6,278.60
Tidioute oil pipe company	Tidioute	30,216.45	23,493.00
Titusville pipe company	Titusville	37,899.92	23,191.91
Taft & Payne pipe company	Franklin	18,665.24	17,307.63
Union pipe company	Parker	783,697.25	411,332.31
United pipe lines		819,331.91	647,111.19
Vandergrift, Formon & Co.'s pipe line	Oil City	69,081.84	
Total		3,202,057.61	2,241,479.77

*Refined.

PITTSBURG HOMES AND HOUSES.

NUMBER AND VALUE OF BUILDINGS ERECTED DURING THE YEAR 1874. DECREASE FROM PREVIOUS YEAR.

The number and value of buildings erected in the city of Pittsburg during the year ending December 31, 1874, is about two hundred less than in the previous year, as follows, viz :

WARDS.	Number of buildings	Value....	WARDS.	Number of buildings	Value....
First....................	4	$84,500	Twenty-first...........	36	70,900
Second.................	8	83,100	Twenty-second........	12	44,900
Third....................	3	8,000	Twenty-third	22	54,100
Fourth	7	23,700	Twenty-fourth	4	8,400
Fifth	17	69,100	Twenty-fifth	22	92,300
Sixth....................	38	72,900	Twenty-sixth..........	12	30,400
Seventh................	8	44,300	Twenty-seventh.......	12	23,700
Eighth	22	68,700	Twenty-eighth	3	7,300
Ninth	2	1,800	Twenty-ninth	5	46,300
Tenth	2	2,600	Thirtieth..............	3	3,300
Eleventh...............	54	150,500	Thirty-first............	12	16,200
Twelfth	15	40,800	Thirty-second	32	55,100
Thirteenth..............	28	37,300	Thirty-third...........	2	4,000
Fourteenth.............	45	219,900	Thirth-fourth	13	27,100
Fifteenth	21	55,500	Thirty-fifth............	5	4,500
Sixteenth	52	117,300	Thirty-six.............	18	63,600
Seventeenth............	66	134,400	Thirty-seventh........	30	36,600
Eighteenth	56	76,000			
Nineteenth	35	74,600	Totals..............	775	2,157,700
Twentieth...	49	154,000			

Of the above buildings 439 were bricks, and 301 frames ; 35 were additions and alterations. During the year, eight buildings were condemned and taken down ; six chimneys and eleven fire-walls were also condemned and repaired. The receipts of the office for the year were $3,124, which have been paid into the city treasury.

FAILURES IN 1874.

The statistics contained herein have been prepared and compiled with great care, and their reliability may be depended upon. What they present may in truth be regarded as actual ascertained *facts*, with nothing of conjecture or inference about them.

In the figures presented some anomalies are apparent which it would be difficult to account for under any general rule, and we leave them to the ingenuity of our readers. No doubt the causes in some instances are so purely local as to make it uninteresting to the general reader to attempt to trace them; as for example, why the number of failures should be greater in 1874 than in 1873 in States like Connecticut, Indiana, Maine, Massachusetts, New Jersey, Pennsylvania, &., &c., and less in Alabama, Mississippi, Missouri, North Carolina, &c., &c. Without further introduction or speculation, however, we submit the figures, giving in juxtaposition corresponding return for years 1871, 1872 and 1873.

FAILURES FOR 1873 AND 1874.

STATES.	1874.		1873.	
	No. of Fail's.	Amount of Liabilities.	No. of Fail's.	Amount. of Liabilities.
Alabama	48	$963,000	52	$1,337,000
Arkansas	22	406,000	17	307,000
California	68	2,571,000	70	1,500,000
Connecticut	151	2,286,000	104	1,452,000
Delaware	27	578,000	31	663,000
District of Columbia	18	256,000	13	240,000
Florida	14	293,000	10	258,000
Georgia	118	1,845,000	67	2,113,000
Illinois	332	7,510,000	329	7,109,000
Indiana	167	2,397,000	134	2,260,000
Iowa	144	2,034,000	141	1,917,000
Kansas	94	988,000	94	821,000
Kentucky	167	1,879,000	125	2,287,000
Louisiana	99	4,429,000	74	2,831,000
Maine	84	1,663,000	80	752,000
Maryland	110	1,691,000	63	1,229,000
Massachusetts	416	10,600,000	309	11,224,000
Michigan	286	4,477,000	248	3,917,000
Minnesota	60	1,029,000	61	944,000
Mississippi	66	1,555,000	79	909,000
Missouri	175	3,061,000	188	5,987,000
Nebraska	42	521,000	22	311,000
New Hampshire	32	266,000	27	513,000
New Jersey	146	3,854,000	119	2,482,000
New York	573	10,295,000	544	13,721,000
New York City	645	32,580,000	644	92,635,000
North Carolina	56	542,000	63	672,000
Ohio	343	8,481,000	331	11,320,000

STATES.	1874.		1874.	
	No. of Fail's.	Amount of Liabilities.	No. of Fail's.	Amount of Liabilities.
PENNSYLVANIA	644	34,774,000	576	31,445,000
Rhode Island	71	1,250,000	58	15,259,000
South Carolina	61	1,531,000	36	1,927,000
Tennessee	94	1,585,000	77	1,636,000
Territories	67	969,000	44	868,000
Texas	142	2,201,000	116	1,251,000
Vermont	36	380,000	21	370,000
Virginia and West Virginia	111	1,514,000	125	2,188,000
Wisconsin	101	2,575,000	81	1,574,000
Total	5,830	155,239,000	5,183	228,499,000

FAILURES FOR 1871 AND 1872.

STATES.	1872.		1871.	
	Number of failures.	Amount of liabilities,	Number of failures.	Amount of liabilities,
Alabama	75	$1,501,000	26	$525,000
Arkansas	20	217,000	15	95,000
California	80	2,434,000	89	4,279,000
Connecticut	70	2,370,000	77	3,915,000
Delaware	20	189,000	11	208,000
District of Columbia	8	59,000	9	158,000
Florida	15	179,000	2	11,000
Georgia	73	1,293,000	42	964,000
Illinois	185	11,470,000	172	5,820,000
Indiana	80	991,000	60	860,000
Iowa	81	876,000	69	797,000
Kansas	90	860,000	58	790,000
Kentucky	99	2,059,000	80	1,163,000
Louisiana	85	3,100,000	45	2,437,000
Maine	90	1,072,000	81	1,420,000
Maryland	75	5,045,000	61	1,194,000
Massachusetts	353	25,374,000	210	8,241,000
Michigan	175	2,720,000	125	1,521,000
Minnesota	43	407,000	37	471,000
Mississippi	53	591,000	30	355,000
Missouri	175	2,670,000	99	1,995,000
Nebraska	17	201,000	11	251,000
New Hampshire	37	447,000	21	129,000
New Jersey	126	2,036,000	72	597,000
New York	423	8,417,000	321	9,051,000
New York city	385	20,684,000	324	20,740,000
North Carolina	30	282,000	35	390,000
Ohio	226	6,569,000	189	4,077,000
PENNSYLVANIA	445	9,422,000	357	7,110,000
Rhode Island	40	1,179,000	21	303,000
South Carolina	40	801,000	30	801,000
Tennessee	56	1,438,000	42	369,000
Territories	15	252,000	....	....
Texas	75	860,000	38	673,000
Vermont	30	229,000	25	282,000
Virginia and West Virginia	103	1,635,000	76	1,722,000
Wisconsin	66	1,127,000	61	386,000
Total	4,069	121,056,000	2,915	85,252,000

The noticeable feature in the above is that, while the number of failures exceeds that of last year, there is a marked diminution in the *amount of liabilities.* Two causes are assignable for this, viz: First, that the panic of 1873 caused the failure of an unusual number of large houses, thus raising very much the average amount of liabilities over *all* previous years. Second, that the volume of business had been greatly diminished during 1874, so that when failures did occur, the liabilities were comparatively light; and, further, that the houses which succumbed during the year were in a great degree a smaller class of traders than those of 1873, and, indeed, we may add, than the average of those of several preceding years.

FAILURES—1857 TO 1874—UNITED STATES.

	No.	Amount.		No.	Amount.
1857	4,032	$291,750,000	1868	2,608	$63,774,000
1858	4,225	95,749,000	1869	2,799	75,054,000
1859	3,913	64,394,000	1870	3,551	88,242,000
1860	3,676	79,807,000	1871	2,915	85,252,000
1861	6,993	207,210,000	1872	4,069	121,056,000
1862	1,652	23,049,300	1873	5,183	228,499,000
1863	485	6,864,700	1874	5,830	155,239,000

AGGREGATE STEAM POWER OF THE WORLD.

Dr. Engel, director of the Prussian Statistical Bureau, has been making estimates, on such statistical data as is available, of the total horse power of steam engines in the world. As every country has tolerably correct railroad statistics, Dr. Engel thinks that the following returns with reference to locomotives is not far from right:

	Year.	Number.		Year.	Number.
United States	1873	14,223	Holland	1872	331
Great Britain	1872	10,933	Belgium	1870	371
Zollverein	1871	5,927	Switzerland	1868	225
Russia	1873	2,684	Egypt	1870	212
Austria	1873	2,369	Sweden	1872	185
Hungary	1869	506	Denmark	1865	39
France	1869	4,933	Norway	1871	34
East Indies	1872	1,323			
Italy	1872	1,172	Total		45,467

It may be assumed that there are still four or five thousand additional locomotives in countries from which no statistics have been received, so that something like fifty thousand engines of that description, of an aggregate of 10,000,000 horse power are now in use. Dr. Engel estimates all the engines in use—locomotives, marine, and stationary at about 14,400,000 horse power.

Assuming that the above statistics are approximately correct, it would appear that one-third of all the steam engines and steam power in the world are employed in the United States. This will, in some degree, account for the extraordinary industrial progress of this country and the high rank it maintains in all departments of practical engineering. The population of the United States is 40,000,000, while the aggregate population of the other countries above named exceeds 350,000,000.

PART II.

REPORT ON LABOR.

LABOR REPORT.

A PLEA FOR THE CONTINUANCE AND PERFECTION OF THE BUREAU.

If it were possible to free the discussion of the questions growing out of the relations of labor and capital, from the distracting glamour of passion, prejudice, and unreality that is made to veil it, and seek a solution through an impartial investigation and exposition of the truth, much that now seems dark would be made clear, and evils that many hold to be without remedy would be found capable of easy adjustment. These obstacles, however, will always exist, and deter human progress, so long as the contest between abstract right and the right of the strong arm continues, or until mankind reach that perfection of moral growth, in which, as individuals, communities and nations, they will recognize *practically*, as they now do only *theoretically*, the wisdom of "doing unto others as they would that others should do unto them." Until that time the contest must continue. And they are and will be the useful, beneficent workers, who, in the face of such obstacles, seek to keep so much of the truth before the people, as will prevent retrogression, and secure at least some measure of progress.

The discussion of what we call the relations of labor and capital, is new *only* to our generation. In all nations that have made any progress in civilization, and in all ages, so far as we can know, this conflict has progressed in various forms, the form only varying from age to age to adapt itself to the progress made in the art of societary organization. And in this fact, and the knowledge we have, that the cause of the toilers of the earth is presented from a higher and more advantageous standpoint now than ever before, is the best answer to those who hold all such discussion to be visionary, demagogical, and what it is now fashionable in some quarters to denounce as "communistic," and who hold that property is above men, and that the suffering and privations of the poor, who starve when speculation brings monetary disaster, are among the evils that are incurable, and must be borne with a spirit of philosophical fortitude. It is also the best encouragement to the humanitarian publicist, that the hope of human progress is not an *ignis fatuus*, but a real and tangible good, to be advanced by patient labor and earnest faith in the eventual triumph of right over wrong.

If the discussion in our day turns upon what constitutes an equitable distribution of the rewards of industry, as between the worker who supplies the sinews and the employer who furnishes the superintendence ; or, between these two, and the capitalist who supplies neither, but reaps his profit from the burden imposed upon industry for use of capital that will enable it to work ; the progress it indicates over the ages when the debate was, not whether the workman was entitled to an equal voice in determining the share of his product he should own ; *but, whether he should own himself or constitute a part of the capital invested*, is certainly real, conspicuous and significant.

And, if this progress has been made, as it has, through the growing acceptance among men of the reforms demanded by abstract right over the right of the strong arm, there is surely nothing in the experience of the past to discourage hope for the future or lead to doubt that human progress will continue with an advance accelerated by the momentum and guided safely by the light of that experience. There is every reason to hope then that in the near future in the discussion of measures of public polity through the press, upon the platform and in legislative halls, the objective point will not be so entirely to secure increased profit for the employment of capital as if that were the chief or prime necessity, as to secure the employment and adequate compensation of labor, recognizing it as something more than the mere incidental of the former.

Until this point is reached there is little probability that agitation will cease. The measure of success achieved in this generation is to be found in a marked degree in the recognition of the importance of the subject given in the establishment of Bureaus of Labor Statistics in some of the States, conspicuously in Massachusetts and in this State.

The creation of these Bureaus is traceable directly to the demands of those who represented the most aggressive labor reform sentiment of the time.

Since the establishment of these institutions there has been less disposition to form political labor parties, the hope being that the facts brought out by their operation will lead to amelioration more certainly, peacefully and conclusively than by political action. It is much to be regretted that this action has been misunderstood, and that certain journals that aspire to cater for the good will of the employing class, in their super-serviceable zeal have mistaken the faith of labor in the sincerity of this favoring legislation, and raise a shout of triumph over the decline of strength of the labor reform agitation. This is having its natural effect in inciting concerted movements among those who cannot understand the recognition of the right of the laborer to seek to better the condition of his class, looking to the abolishment of these bureaus or to such legislation as will emasculate their usefulness and leave them without power to accomplish any good result. If they succeed it will take but a very short time to demonstrate the viciousness of the advice under which they have acted.

There seems to be an extreme sensitiveness among those who are recognized as what are called leading business men, on the subject of the relations of labor and capital, that impels them to see everything in connection with it through distorted mirrors, imagining every assertion of the rights of labor to be an attack more or less covert upon the rights and security of property; and so leading them by their impulse to smother inquiry to bring about the very danger they so strongly deprecate.

Any mind of average intelligence can, if open to the plainest reasoning and to the teachings of universal experience, comprehend that it is only through repression of the truth that danger to the rights and security of any can grow. Yet, even in as intelligent a body as the "Philadelphia Board of Trade" a demand is made that such inquiry shall be smothered and that the legislation provided to effect it shall be repealed.

Is it impossible for those gentlemen to comprehend the fact that the demand for such investigation comes from the most numerous, and consequently powerful class, politically, of our citizens? And that, if their reasonable demand shall be rejected, they have the power, and under the impulse of a wrong inflicted, may use it much more effectively and less conservatively than in this inquiry?

The existence of this jealous dread of unwarrantable interference has been the chief obstacle in the way of the Bureau in the performance of this part of its work. The act of the Legislature instituting the office and defining its duties requires the Commissioner "to collect, compile and systemize statistics, with reference to the subject of labor in its relations to the social, educational, industrial and general condition, wages and treatment of all classes of our working people, and how the same effect the permanent prosperity and productive industry of the Commonwealth." Surely there is nothing in the purpose of this legislation as expressed that transcends the duty of a good government. Yet this is what is claimed to be inquisitorial and unwarrantable interference with the private affairs of business men. So long as there was no legislation providing compulsory process by which the Commissioner could enforce the giving of information required, the subject was only treated with contemptuous indifference. Hostility being shown by simply, on the part of a few, refusing to give information until compelled; on the part of a much larger number, courteously enough, promising to fill and return the blanks as requested, but quietly and persistently neglecting to do so. It was not until the Legislature of 1874, in organizing the department of Secretary of Internal Affairs, under the provisions of the new Constitution, provided the necessary powers and penalties to secure the means of performing the work, that notice was taken of the subject other than as above described. Now, however, we are given to understand that an effort very formidable is to be made to repeal the legislation of 1874, and practically to abandon the work that those who asked its establishment believed should be done.

The temper in which this movement for repeal is initiated, shows clearly one of two things to be the truth, either that the officers of the Bureau have been proposing to make impertinent and unnecessary inquisition, or that its opponents are conscious of the existence of a state of facts which in their estimation will not bear the light. Otherwise it can hardly be conceived that so dignified and well informed a body of men as the Philadelphia Board of Trade or any of its members would have applied the epithets, "mischievous busy-body" and "communist," to the author of the bill. An examination of the bill proposed as an amendment shows that it is intended to deprive the Bureau of any power in the future as it has been in the past to accomplish any practical results in the direction of throwing light upon the condition of the labor of the State, by providing that each individual, firm, or corporation of whom information is sought, shall be the exclusive judge of the propriety of the questions propounded. Now this state of facts renders it incumbent upon the Bureau to show if it can that there is no cause for this extreme sensitiveness, furnished by any thing it has done or proposed to do, and this can best be shown by simply inserting here the character of the questions that have been asked of employers with regard to the workmen in their employ. And for this purpose we insert the following copy of the blank we have been using for this purpose; taking one that was filled and returned last year as an example:

DIRECTIONS.

First.—Give name or style of firm, and what manufacture: Harrisburg Cotton Mills; brown sheetings and shirtings.

Second.—Quantity in measure and value in dollars of annual product:

Third.—Whole number of persons employed: Two hundred and eighty, (280.)

Fourth.—The number of each class employed, with the name or title by which they are known in the trade as bosses or foremen, machinists, carpenters, laborers, &c., with the average wages (daily) of each class and average time worked in year:

OCCUPATION.	Men........	Women......	Apprentices..	Youths and children....	Average daily wages......	Average time in operation during year,	REMARKS.
Spinners—foremen.......	3	......	......	......	$2 41⅔	Sixty-six hours per week.	The mill produces 3,500,000 yards of heavy sheetings and shirtings and consumes twenty-five hundred (2,500) bales of cotton, and pays $67,000 for labor and $10,000 for supplies annually.
Spinners	......	8	......	......	1 05		
Spinners	......	......	......	91	50		
Weavers	7	......	......	......	2 00		
Weavers	......	67	......	......	92		
Weavers	......	......	......	7	50		
Carders	13	......	......	......	1 57		
Carders	......	25	......	......	75		
Carders	......	......	......	27	62½		
Dressers	2	......	......	......	2 45		
Dressers	......	1	......	......	1 16⅔		
Dressers	......	......	......	6	50		
Engineers	2	......	......	......	2 66⅔		
Packers	2	......	......	......	1 85		
Packers	......	8	......	......	66⅔		
Machinists	6	......	......	......	2 40		
Watchmen and laborers..	5	......	......	......	1 58		

Signature,

EDWIN ANDREW,
Superintendent.

On the back of this blank is the following explanation:

COMMONWEALTH OF PENNSYLVANIA,
OFFICE OF BUREAU OF STATISTICS OF LABOR AND AGRICULTURE,
HARRISBURG, PENNSYLVANIA, ...187 .

This blank is intended to cover returns for statistical purposes of all manufacturing and mining industries.

It is prepared and issued in pursuance of the several acts of Assembly, as follows, viz:

First.—An act, entitled "An Act for the collection of mineral statistics," approved the 9th May, 1871, P. L. 1874, p. 261. This act requires the collection of Mineral Statistics by the Auditor General, and empowers him to require answers to his questions under a penalty of one hundred dollars for refusal or neglect.

Second.—An act, entitled "An Act to provide for the establishment of a Bureau of Statistics on the subject of labor and for other purposes," approved the 12th day of April, 1872, P. L. 1872, p. 59, which imposes the following duties, viz:

SECTION 2. The duties of such officer (the commissioner) shall be to collect, compile and systemize statistics, with reference to the subject of labor in its relations to the social, educational, industrial and general condition, wages and treatment of all classes of our working people, and how the same effect the permanent prosperity and productive industry of the Commonwealth.

SECTION 3. It shall also be the duty of such Bureau to collect, collate and classify statistics relating to the mineral, manufacturing, agricultural and commercial productions of this Commonwealth.

Third.—An Act transferring the powers and duties imposed upon the Auditor General by the first named act, to the Secretary of Internal Affairs, providing that, until the Department of Internal Affairs be organized, the duties in reference to statistics shall be performed and the powers exercised by the Commissioners of Statistics.

It will be seen by the character of the questions on this blank that we seek to avoid any impertinent inquisition into the management or privacy of business men—our object being merely to obtain such proper information as will enable us to report facts of general public interest as they are.

It is therefore hoped that the response to our questions will be promptly and carefully given, to the end that the purpose of the law may be realized, in instructive and useful reports.

THOMAS J. BIGHAM,
Commissioner of Statistics.

It will be seen by this example what is the character of the questions asked, and how far the charges that have been made are sustained by the facts.

It may be said that there is no need of this inquisition in any form or for any purpose. That, it must certainly be conceded even by those who make the assertion, is a matter of opinion ; and also that the number of those who regarded it as necessary and desirable, was sufficiently large and earnest to convince the Legislature of its propriety. And there can be no doubt, but that those who asked for this Bureau, are as much entitled to be heard and heeded as those who object to it, who, as a class, are constantly asking for legislation in their favor under the plea of public necessity.

We only assert here, that the Bureau was created in response to an urgent and wide spread demand, and leave the question of the fitness of the demand to be determined by the facts that are developed. One thing, however, should not be lost sight of, which is, that unless there is real and tangible reason for setting aside the inquiry proposed through this Bureau, both by the Constitution and the laws made to give it effect, it ought not to be amended as proposed.

If it is deemed necessary to provide against abuses, the law can be so amended as to provide, that in suits for the recovery of the penalties, the courts shall judge of the propriety of the questions asked, in view of the purposes of the law as deducible from its text.

If, however, it is intended by the Legislature, as it evidently is by those who are responsible for this memorial of the "Board of Trade," and the bill introduced in connection with it, that the Bureau shall not "collect, compile and systemize statistics, with reference to the subject of labor in its relations to the social, educational, industrial, and general condition, wages and treatment of all classes of our working people, and how the same affect the permanent prosperity and productive industry of the Commonwealth;" this portion of the act should be repealed in terms, so that no promise should be made that is not to be performed.

The whole subject could then be regarded as plainly remanded to the people, and they can consider the question whether such legislation is advisable or necessary, or whether the repeal is proper, and act accordingly. Under the action proposed, however, the law will pretend, indeed, assert the necessity of the inquiry, at the same time that it interposes insuperable obstacles to its being made. This kind of legislation is not honest, and consequently is always a misfortune. The insincerity and palpable double-dealing it manifests is unworthy of a great State, and can have no other effect than to confuse, embitter and disastrously intensify a discussion, (that could and ought to be deliberate and without passion,) until it becomes the cause of riot, bloodshed and revolution. We cannot do more here than repeat some of the reasons urged in the introduction to our last report, in behalf of a thorough and exhaustive investigation, such as is contemplated by the legislation of last winter, now sought to be indirectly repealed. All our inquiries, all our experience of the difficulties in the way of the work, all the indications of public sentiment, and of the actual condition of our people, give those reasons a cumulative force, that we cannot believe can be safely or justly disregarded.

"The enormous losses to the general production of the State, the financial suffering and disappointments (not unfrequently resulting in bankruptcy) of employers, the bitter enmities, discontent, poverty and demoralization of workmen, and the distress and degradation of their families, consequent upon the often recurring strikes and conflicts between employer and employed, would seem to indicate that some means should be taken to bring about a better understanding of the needs, rights and mutual relations of the two classes into which the great and increasing activities of the age are rapidly dividing the productive population of the country. More especially since, in the contests between the two, great injustice is frequently done by each to the other, in the anger and heat and personal antipathies engendered in the mutual effort for mastery. The interest of the whole people is too great in the steadiness, evenness and uninterruptedness of our productive progress, to make it wise or just that it should be at the mercy of factiously contending interests. While the axiom is probably true in its legitimate sense that 'commerce between citizens should be free and untrammeled,' and that 'the best legislation is the least,' yet it is none the less true that the rights and interests of all the people in the general prosperity and progress may not be justly left at the mercy of the ignorant, or vicious, or reckless, or grasping contentions of a portion; and when these contentions assume the proportions of revolutionary agitation, involving our greatest and most important industries, dictating to great communities prosperity or adversity, and even threatening the permanency of our political system, the right and duty of the Legislature to interfere to secure the rights of all by composing the differences or compelling the practice of justice by laws adapted to the end in view, cannot be questioned. For years all the great industrial operations of the State have been disturbed by frequently recurring contests between employers and employed, to the serious detriment of the general good, and have gradually assumed such huge proportions as to create a general impression among thinking people that some serious defect exists in the relations of capital and labor. If the trouble is without reasonable cause, and, as is often asserted, merely the work of visionary and mischievous demagogues, it is to be noted that they have achieved unprecedented success. If, on the contrary, as is equally often asserted, it is the result of real grievances and oppressions, growing out of legislation induced by the general eagerness to promote material progress, and the resultant aggregation of enormous capital and power in few hands, individual and corporate, in either event it is the duty of the Legislature to guard the rights of the people; and the multiplicity of contradictory statements from one side and the other makes it necessary that some measure should be adopted to bring to its knowledge and that of the people the real facts, in order that it may act, not in the dark or in the uncertain light of interested and unsupported assertion, but of the truth, authoritatively ascertained and distinctly stated. To ascertain the facts by systematic inquiry, and present them, properly collated and succinctly stated, would seem, from all the facts connected with the origin of the Bureau, to be its province and its duty, and with this understanding it commenced its labors in this branch of its inquiries.

"If a just regard for the rights and interests of all our people requires (as it assuredly does) that such information shall be sought, collated, and kept in convenient form for general reference; and, again, if it is probable, (as past experience shows it is,) that reference to such archives of authoritatively collected and faithfully stated facts may prevent in the future some disastrous blunder in legislation, or cruel tyranny in enterprise; the fatuity of the neglect to provide it, through parsimony in expenditure, or cowardly, or reckless indisposition to look beneath the surface and see what is really there, can hardly be measured in words.

"The third obstacle arises partly from the second and partly from unthinking, perhaps unconscious, adhesion to old, accustomed ideas and habits of thought—indignant irritability, growing out of the frequent strikes among workmen, and consequent conflicts and losses; together with a sentiment, (that inquiry shows yet to prevail to an astonishing degree,) that the possession of capital, and the handling of it, gives to the holder some indefinable access of dignity and right of control over him whose only capital is in his brains or sinews, and the fear of anything that threatens innovation upon the existing order of things, as calculated to destroy this inequality, or, (in the language usually used to express it,) 'destroy all discipline among workmen.' It is apprehended that, in this craving for mastership, which is not peculiar to any individual, but common to all mankind, and the outgrowth of, or rather sediment left by, the old, effete, theoretically discarded, but too often practically retained doctrines, of the divine right of the strong to rule, is to be found the cause of much of the oppression on the one hand, and resistance on the other, that leads to the conflicts so much to be deplored. The capitalist operator who controls one or two hundred thousand dollars, and in the prosecution of his enterprise employs five hundred men at wages, is doubtless performing the functions of a valuable citizen, in using his means and business energies to add to the volume of the general wealth. He unquestionably deserves, and should receive, such legislative protection and encouragement as will secure his investment and compensate his efforts. But what of the five hundred of his neighbors who, having no capital but their sinews, join that to his money to make it available? Are they to go for nothing in the estimate of general, social and political values? Are they any the less citizens of the State? Is there anything in their position in the social or political system that should degrade them; or is their honest toil in their employment in itself a degradation? Are they not, in their sphere, as fully, as valuably, and *as honorably* performing the functions of valuable citizens as the other? What reason, then, is there in ethics or sound policy why they may not approach the Legislature and ask such protection as they think is needful and just? And why may not the Legislature—if their statement shows one state of facts and that of their opponents another—take measures, by the institution of a Bureau like this, to ascertain where the truth lies between these contradictions?

Capital comes to the Legislature and asks that charters shall be granted vesting special privileges in corporations; conferring on them powers and franchises that individual citizens alone may enjoy without legislation. The ground upon which such privileges are asked and granted is the development of the wealth and resources of the State. These aggregations of capital stimulate all productive activities, and their very success intensifies industrial vigor. The little one-horse work-shop of the past is too slow for the seething, surging activities of the present, and capital again applies to the Legislature for the incorporation of mining and manufacturing companies, and the place of the little shop at the corner of the street or the cross-road, is occupied by the grand manufactory, glowing with the flame of its hundred forges and roaring with the clash and turmoil of its thousand workmen. Now, does he, who to-day in that grand factory, working for wages, represents the small operator of yesterday in the two-benched or one-forged shop at the cross-road, change his status by becoming, in the new order of things, a wage worker? Is he any the less the citizen, the man, rightly the sharer in all the grandeur of the progress his labor helps to promote? And when he comes to the Legislature and claims that of all the enormous growth of wealth that is produced year by year, he gets less and less; that, as the aggregation of capital progresses, the numbers of his class increase, and in proportion to that increase the pressure upon them becomes heavier; that their attempts to organize to secure their share of the benefits of this progress, are met with charges of conspiracy; of brutal violence; of agrarian murders; that the great supplies of natural wealth that God has stored for the blessing of our age, are being unduly wrested from the many by the few; and asks that, in the exercise of its functions as conservator of the rights of all, it shall institute inquiry into the condition of affairs for the public good; should he be turned away with a cold negative, or a misleading, deceptive promise of acquiescence? There can be but one answer to each of these questions.

"While any interference in the private business affairs of employers, of a character that would give color to the charge of espionage, as, for instance, requiring answers to a series of questions that would show, or could show, or make known to the public, or individuals, the profits of their business, or expose any secret of their trade that is necessary to their success; bring to the light of popular or unfriendly criticism the condition of their bank accounts or amount of their wealth, would certainly be unwarrantable, and beyond the sphere of justifiable legislative inquiry; yet, as the very breath of the life of their enterprise depends upon the protective care of the government, as they are only integers in the great mass of the body, social and politic, that the Legislature is instituted to conserve; as the wage workers, whose co-operation by their labor with capital and intelligence, is necessary to the production of industrial results—are equal integers of that body—are no part of their bank accounts—no part of the private or secret machinery of their trade—and no part of their net profits; but equals before the law, and equally entitled to consideration by the Legislature, in determining the encouragement and protection that shall be given to all, for the promotion of the good of all; it is certainly difficult to find any just or well founded objection to the answering of such questions as are necessary to determine their actual condition, and how they have been and are being affected by legislation intended to advance the general interests.

"There is another consideration beside that of mere abstract right that ought to command the acquiescence of employers in the purposes of this inquiry. It is to be assumed that they intend as a class to deal justly. It will indeed be a dark day in our history, when it is demonstrated that so large, so powerful, so enterprising a portion of the citizens of the State, shrink from impartial inquiry into a subject of such momentous consequence. If the relations of labor to capital are as they should be, the inquiry proposed will demonstrate it. If they are not, that will be shown, and the light of truth thrown upon the question will show the way to such ameliorations as will secure our progress from interruption As the success of industrial enterprise depends largely upon its security from unlooked for disturbance, whatever tends to prevent disturbance, can be no other than beneficent in its effect. All the facts carefully collected from year to year, and honestly presented, by removing the uncertainty as to what is true, which is the opportunity of the demagogue, and promoting that clear conception of the right which must develope mutual confidence and kindly feeling, can do no other than result in incalculable good. It is earnestly hoped and confidently believed, than when the object sought to be attained through the instrumentality of the Bureau is more generally understood, this obstacle will be measurably removed."

"There seems to be a general unbelief among the workmen as to the sincerity of the legislation establishing the Bureau, and nothing, apparently, but the publication of a report that will demonstrate its value, will remove the impression that the ineffectiveness of the bill was purposely contrived, to give the impression that their demand for a Bureau of Labor Statistics was being complied with, while, at the same, care was being taken that no practically-useful results should follow its creation. When pressed, for instance, to give answers to questions propounded for the purpose of fixing the comparison between actual average earnings and average cost of living, the reply has sometimes been, with a tone of bitterness and suspicion—'yes, you want to find out just how poor we are; how little we can live on, and use it, either to further reduce wages, or prove the degradation of the working classes, that so much is said and written about;' or, 'how do I know that the answers I give you may not lead to my discharge? If there was an honest purpose to make an investigation that should secure a needed reformation, why did not your law give you power to send for persons and papers, subpœna witnesses, and compel answers? Then, it would have looked as though your inquiries meant business. We could have been called to give testimony, subject to cross-examination, and it would not have the effect of *ex parte* evidence, or be open to the charge of voluntary information without the force of evidence, unavailing for any good purpose, and leaving us open to the charge of seeking the injury of our employers by making factious, fault-finding statements, calculated to lead to interruption of business by exciting turbulent agitation.' Upon being reminded that the Bureau was created in answer to their petition, and for the purpose of bringing out the truth, they reply: 'All that can be readily demonstrated by giving the inquiry the force of law, and then no individual would be open to the charge, or liable to the penalty of opposing the interests of his employer. Our statements voluntarily given have always been disputed, our efforts to agitate the importance of organization for mutual support and protection, have always been called conspiracy and agrarianism. Our right to organize has been called in question, and the whole power of capital has been exerted to break down attempts in that direction, even to the extent of prosecutions for conspiracy, which, in at least one instance, resulted in imprisonment, and even when the great numbers, intelligent leadership, and resolute fortitude of our people have given us partial success, the privations and sufferings consequent on the effort serve to warn off and debar others from like attempts. If the Legislature really desires the righting of any wrong that may exist; if, to this end, it really desires to get at the facts, there is a plain and simple way to reach them, and there is no reason for enacting laws for any other of the general purposes of legislation that will not apply with equal force to this.' "

We repeat that every thing that has come to the knowledge of the Bureau since these extracts were written gives to the argument a cumulative force that it is not safe nor just to disregard. At the time they were written the country was enjoying an apparent prosperity which under the circumstances was the wonder of the world. Before they were printed, the failure of one reckless speculator in other peoples' earnings had spread financial panic broadcast over the land, stopped the wheels of industral progress, unsettled values and left the country in a condition in which its labor has been reduced in its compensation, what with paucity of employment and low rates of wages at least one-third. When it is considered that the laboring classes upon whose industry every dollar of the production of wealth rests, are not responsible in any sense near or remote for this state of affairs, and that they are the sufferers by it almost exclusively so far as deprivation of the power of procuring the means of subsistence goes, while to all the various classes of capitalists the only deprivation is a cessation or suspension of profit, and while to the dealer in money, as a marketable commodity, not even this deprivation has come; it surely should not be called communism, demagogism or any other of the usual clap-trap epithets used to smother or befog honest inquiry. To assert that in such a condition of things there is absolute proof of radical mistake, wrong, or error, in a system that renders it possible, and to demand that the State should sanction and maintain such collection and analysis of statistical information as will lead to the determination of *what* is *wrong* and the development of wise and equitable measures of reform is not demagogism or communism. Will not a refusal to do this in the face of the indubitable facts known to exist amount to a practical denial of the plainest justice to nearly if not quite half of our people? Is it possible to believe that it can be done without exciting passionate, dangerous and even revolutionary agitation? Be it remembered, that if only a comparatively small portion of the classes of the population interested in the questions involved have been heretofore united in the attempts to organize them for resistance by political action or otherwise, it is because of the promise of reformatory investigation tendered in the progress of legislation in this direction. If this legislation is to be changed as demanded by the memorial and bill of the board of trade, it will be a practical breaking of that promise, and a decision, final, so far as the Legislature that adopts it is concerned, against the claim of labor that it is unduly discriminated against, *and that without inquiry.*

The present organization of the Bureau ceases to exist in May. But under the new Constitution and the legislation of last winter, it should, under the Secretary of Internal Affairs, be more valuable than the most exalted ability could have made this. And the question to be determined, in the result of the amending legislation proposed, is simply whether the labor, represented by the wage workers of the State, has a right to direct, definite and protective inquiry and legislation, or whether, as heretofore, our statistical inquiries are to consist of mere columns of figures, showing totals of results of earnings of capital, useful as guides in its investment, but leaving labor and its compensation, condition and rights, in the position of mere incidentals in the general economy. In our report of last year, we gave our best efforts to an honest inquiry into the condition of the laboring classes of the State, but were foiled in our attempts to obtain extended information by direct inquiry, by the sensitive jealousy of investigation, that stands so obtrusively in the way, and that has its first decided and aggressive expression in the bill and memorial we have been considering. Under these circumstances, we devoted the greater portion of our space to the production of the analysis of the census returns and classification of workmen, according to their compensation and actual earnings, with the results set forth in the tables we published. Those results were as surprising to us as they could be to any one interested in the question. They were, however, honestly reached results, and their approximate correctness has not been assailed.

Indeed, so far as the general business classes of the State, and the press representing them, are concerned, no notice has been taken of them. They are given in such form, that any one of ordinary intelligence, who cares to do so, can test their correctness, and the fairness of the use of the data upon which they are based. That they completely discredit the generally received reports of the enormous compensation of labor during a time that will long be known as a period of extraordinary industrial prosperity, is a fact for which the Bureau is not responsible; unless, indeed, it can be, and is shown, that the data are falsely quoted, or the calculations vitally erroneous. That they have not been assailed is pretty conclusive evidence of their being unassailable. Another pregnant fact is found in the returns made to the Bureau by the more liberal and enlightened of the business men who were applied to, who recognized the value of the inquiry, and cordially acquiesed in the demand, which is, that they bear out fully the classification we made, and the results reached. Now, as a matter of legislative consideration, the question is a pertinent one, whether labor, in receiving the compensation thus shown to have been paid it, was fairly paid? If it was, then that much of the inquiry purposed as the work of this Bureau may be deemed needless, and abandoned. If it was not, then it is certainly a showing, that every consideration of social justice and good government requires, should lead to such investigation as would eventuate in the adoption of a just and equitable remedy. If simple justice is the objective point of legislation upon this subject, no possible harm can come of a full, fair and exhaustive examination of the condition of the relations of capital and labor as proposed, and there can be no rights inhering in the holders of capital that can be violated by the Legislature making that examination practicable.

We expressed the hope last year, that we would this year be in a position to make a much fuller, and more valuable exhibit than then. But the same obstacles continued through the Legislature failing to confer the authority needed, which is embodied in the provisions for organizing the Department of Internal Affairs, and which it is now proposed shall be repealed before their effect can be practically tested. We can only hope that the Legislature in its wisdom and justice, will not embarras our successors with the disabilities that we have labored under, but that the value of the Bureau may be subjected to at least an honest and practical test.

The effect of our inquiries and investigations last year, was to demonstrate, as we believe beyond the reach of successful dispute, that the generally received impressions, as to the enormously great compensation of the working classes, were grossly erroneous.

Nothing that has since occurred, or that has come to our knowledge has tended in any degree to shake the credit of that demonstration. On the contrary all additional evidence corroborates the conclusions reached. In the face of this fact, the situation must now be recognized as desperate. Our conclusions of last year show that out of 427,580 adult male wage workers 29,848 being foremen of mines and shops, railroad conductors and bookkeepers of the first class, the highest paid skilled labor averaged per year, $737 70; 171,512 skilled workmen, educated mechanics, averaged per year, $545 61; 226,220 laborers, unskilled workmen, averaged per year, $346 95.

This was for the year ending June 1, 1870, the census year. Little noticeable change occurred from that time until October, 1873. There being in that time a gradual shrinkage of wages, but not out of proportion with the shrinkage of other values, and consequent decrease in cost of living. But in October, 1873, occurred the revulsion in trade (known as the panic) which immediately checked industrial operations, and which, although it was generally supposed its effects would be temporary, has continued to grow in force and intensity ever since.

This has materially obstructed the operations of the Bureau in its attempts to procure returns that could be used for tabular statements, in fact making it impossible. Those who have not given particular attention to this phase of the subject, would be astonished in making anything like an extended inquiry among our industrial establishments this year, to find in how large a proportion of them, there was so little being done that detailed reports would be impracticable.

Very many are entirely closed, having given up the attempt to keep their machinery moving at all. Many more just doing sufficient to have the appearance of running, while those doing what could be called sufficient business to cover expenses, were so very small a proportion of the whole as to constitute them exceedingly rare exceptions to the general rule. Probably never in the history of the country has there been a time, when so many of the working classes skilled and unskilled, have been moving from place to place seeking employment that was not to be had—never, certainly for so long a time.

The effect on wages, though very decided, is not so great as upon the amounts actually earned. In cur paper upon the "distribution of the rewards of industry," we have estimated the average reduction in the rates of wages at thirty-three per cent This is fully within the truth. The amounts actually earned must be estimated at a far greater reduction than this. In Beaver, Lawrence, Mercer, Fayette, Westmoreland, Allegheny, the amount of work for miners is reported at from two to four days per week, and that for materially reduced numbers of hands. The following extract from a letter will give a vivid idea of the situation, and is *known* to be a true and not overdrawn picture. The letter is from and refers to Mercer county:

"I will speak the truth to the best of my ability, but if I should not be exact to a few cents other advices will readily correct me.

"Kimberly, Filer & Co., bank No. 1, is shut down. Not working at all. No. 2, pays 63 cents a ton; (a miner digs for a ton 2,150 pounds of coal, if he buys a ton he gets 2,000 pounds.) No. 3, Snyder's, pays 60 cents per miner's ton; Forkers, 70 cents; Philips, 70 cents; Spearman, Ulp & Co., 60 cents; Bethel, No. 1, not working; No. 2, 60 cents per ton; Oakland, 50 cents per miner's ton; Westerman's, 60 cents, with notice of a reduction of from ten to twenty cents per ton. I have given here the lowest prices paid. In some instances there is paid one dollar per miner's ton, and in very few cases there is more than that paid, but it is when the coal is very hard and low. The coal is all screened before it is weighed, and the miner gets nothing for what passes through the screen. The tools a miner needs cost thirty dollars. We pay for smithing one cent per ton, and four dollars for twenty-five pounds of powder. When it is necessary to blast the coal it takes about ten cents per ton for the powder. Supposing each man mined three tons per day for twenty days in the month, at sixty cents per ton, it would amount to $36. Deduct $7 for oil, powder, smithing, wear of tools, &c., and he has left $29 for his month's work, or $1 40 per day for twenty days, and this is far more work than he can get now. Sell the same coal at Sharon for $2 75 per ton of 2,000 pounds, and it produces $177 37½. Deduct the $36 it costs to mine it, that is for miner's wages, and you have $141 37½ to pay all other expenses, and for margin for profit. This looks pretty large, but it may be that the operator cannot afford out of it to pay more for mining; that I know nothing about, but one thing I do know, and that is, that I cannot maintain my family, which numbers seven persons, to be fed, clothed and sheltered every day, whether in panic times or not, on twenty-nine dollars per month."

Another letter from the same county, *inter alia*, speaks as follows: "Around here the men are helplessly poor. Large numbers have not earned ten dollars since last June. While a great number are making from ten to fifteen dollars per month, a small number may be making more, very few indeed are making enough to feed their families. Yet, another ten per cent. reduction has been started in the valley and will undoubtedly find its way all around before it stops. There is something terribly wrong in a system that imposes helpless poverty upon so large a class and then suffers that poverty to become the means of crushing out their very manhood. * * * It has almost literally reached the point in which the children of workmen cry for bread and there is none to give them. Under the circumstances work means starvation. It may be a little slower, but resistance only means the same at a quicker pace. I believe the workmen will stop work to resist this last reduction, and I do not believe they will quietly stand by to see their families starve, nor can they be persuaded that they ought to in a land of plenty. I fear the climax of misfortune will reach us soon. As it is the last feather that breaks the camel's back, so it is the last outrage upon right that breaks the patience of suffering humanity. As an example of the manner in which the fortitude of the people is strained, I may mention the following: Mr. ——, one of our operators, came to his men and said if they would work four months for goods to be taken from his store he could give them steady work, and at the same time they would be helping the company. The men, under the inducement of steady work, agreed to do it, and necessarily quit the stores in which they had many of them been dealing for years, and, owing to the hard times, some of them doubtless left them in debt. After working a few weeks on these terms the operator appeared one evening at their lodge meeting and told them they must submit to a reduction of ten per cent., and he would give them steady work. The workmen reminded him of his previous agreement of only a few weeks past; but the work has been stopped for the last four weeks, and he has closed his store to them. This is the way faith is kept. After inducing them to leave their merchant friends, who, as far as they could, have and would again aid them to pull through a crisis like this, they demand further reduction, and as the men have lost their right to credit from their former storekeepers, and can get no supplies there, close their own stores against them until they are starved into submission.

"Bethel No. 2 has done no work since June last. No. 1 has been working, and the operator has offered to start No. 2 if the men would agree to another ten per cent. reduction, (this is the second ten per cent. reduction since September,) they have agreed to the terms, and work is to be resumed to-morrow, (this letter is dated December 31,) while No. 1 has been notified to stop."

From Morris Run, Tioga county, under date of January 6, 1875, we have *inter alia* the following: "At Arnot and Fall Brook the companies and men have agreed upon terms for the new year, at a uniform reduction of ten per cent. per ton without any contract. The workmen at Morris Run asked for a settlement on the same terms, but the agent demanded a reduction of eighteen per cent. with no contract. The men are very much dissatisfied with the terms offered. Owing to the great slackness of work during the year, a great many of the men are in very straitened circumstances. Over fifty have applied to the township authorities for relief, and if there is not great improvement soon the number will be doubled."

Since the above, in a letter dated Fall Brook, January 19, we find that a settlement has been made at Morris Run on the same terms as at the other collieries mentioned. Work, however, is very slack, says the writer: "We only get two days work in the week, and it is about the same in Morris Run; at Arnot they get a little more."

In this Tioga region the feeling between employees and employed is better than it has ever been before. The settlement that followed the contest of last winter, seems to have been entered into, and carried out in perfect good faith by both parties, and all that appears to be needed is such a revival of business as will make a market for their coal, to give them a fair degree of prosperity. Among others, is a statement from Altoona, as follows, viz: Am a house painter by trade; my wages are $2 25 per day; only have work about half the time, and it has been so for about one year; have a wife and five children; none old enough to work; my expenses are about $35 00 per month; my earnings average, per month, $30 25; my rent is $3 50, making my total expenses $38 50 per month; my brushes and tools cost about $5 00 per month in addition; have, during the year, run behind about $13 25 per month

Another says: Am a laborer; wages $1 12 per day, eight hours work to the day, and get twenty-two days for the month; earnings monthly will average $24 64; this has continued for a year; I have five children, none of them earning anything; my grocery and provision bills amount to about $35 00 per month; I have a property worth about $600, mortgaged to a building association; unless things change greatly it will be swept away from me in a very few years.

Another says: "Am a painter by trade, working in the car shops at Altoona; have three in family; my wages are $1 28 per day; my grocery and meat bills average about $23 per month; my rent is $8; I am going in debt every month from five to seven dollars."

And so it goes in all trades and occupations the same depression and the same breaking down of cherished hopes in the individual workmen, which to too many means the reception of charity, the loss of self-respect, dissipated energy, and through the closing years of life, useless, hopeless deterioration and vagrancy.

The sickening record is long enough. There is not one who reads this who will not have instances enough in his own knowledge and experience to fill any *hiatus* occasioned by its brevity. And we will only add, in conclusion, that this condition of things most emphatically calls for the duly authorized and fully supported inquiry which the creation of the Bureau was professedly designed to secure

That such things can be in a new and free country groaning with the weight of its natural resources, while those groans of over-laden natural garners of wealth are drowned in the louder agony of hordes of its suffering citizens, is proof beyond dispute that something is terribly wrong in its administration and policy ; that there is difference of opinion and doubt as to what that wrong is, is proof just as incontestible that this inquisition is necessary for the public safety ; that there are those to be found who seek directly or indirectly to obstruct the inquisition, is also proof that the evil is the fruit of a consciousness of practices requiring ventilation ; and the issue becomes one between the determination of the people, through their representatives, that justice shall be done, and the evil influences that are equally determined that it shall not be done, if by power of cajolery, ridicule, misrepresentation, intimidation or falsehood, it can be defeated.

We repeat that in pleading with the Legislature to maintain the Bureau and clothe it with power by law to do its work, we are seeking the gratification of no personal ambition or advantage. This will be the last report by its present incumbents. It passes into other hands, but its duties are not partisan, and he will indeed be unworthy of his citizenship, who, entering upon his duties, beginning his inquiries, and seeing the facts unfold before him, does not, under the pressure of the impending necessity that the truth shall be known, work earnestly and honestly to bring it out.

DISTRIBUTION OF THE REWARDS OF INDUSTRY.

The distribution of the rewards of industry constitutes undoubtedly the question that underlies the whole issue involved in the discussion of the relations of labor and capital. If this could be so adjusted as to put all doubt as to the equitable distribution at rest, or even reach a reasonable approximation to that result, all other causes of discontent would be capable of easy and friendly adjustment.

In looking for the reasons for the difficulty of a just solution, we are forced to the conclusion that it is to be found almost entirely in the avidity with which each individual watches all the conditions that affect the success of his own immediate pursuit, and a tendency inspired by that avidity to lose interest in, and indeed the capacity to give thought to, any consideration of the various influences that affect exchanges in the commerce between the citizens of the state and country. Every man striving to secure himself in the shortest possible time against the consequences of reverses that a sad experience teaches each one to expect, becomes so absorbed in the intenseness of his effort to push his own fortunes, that he forgets that his best security lies in preserving an equitable balance of chances for all, comes to regard his own operations as the only matter worthy of consideration, and judges of all proposed public measures as they appear, or he may be persuaded to believe they appear, to bear upon his own individual operations. From these and perhaps other causes any proposed legislation that promises invitation to the introduction of capital has come to be regarded as all that could or need be done on the part of government to promote the welfare and prosperity of the people. As a consequence, the liberal legislation in favor of banking and other corporations has been advocated as a means of developing the industrial resources of the people; and those who have raised a warning voice against the effects of a policy that must eventuate in placing our great sources of wealth in the hands of a few, and clothing them with a dangerous power over the freedom of action and fortunes of the many, have been held, even while the correctness in theory of their views was acknowledged, to have been overcautious, or mischievous and visionary croakers.

In the mean time the policy of stimulating the investment of capital has gone on with the granting of one extraordinary privilege after another, until the whole character of our industrial enterprise has been changed. Our successful industrial establishments have grown to be those almost exclusively in which immense capitals are invested, while the avenues to successful enterprise have been nearly closed against the individual operator with small means. The proportion of employing, or master mechanics, has greatly decreased, while the number of those who work for wages permanently has largely increased. Thirty years ago there were in our State at least forty master mechanics in every hundred. Now there are not more than twelve to fifteen, while the apprentice system is nearly if not quite obsolete. This condition of our industries presents considerations of the gravest import. If it were true, as has been so often asserted, that the change has inured to the advantage of the class which, thirty years ago the small master operators, are to-day the permanent wage workers for the great firms and corporations that have swallowed them up, the outlook would not be so gloomy. But it is not true. If in the review of the progress of thirty years, we find a larger number of reading, thinking, and intelligent men among the working classes, it must be remembered that the extraordinary and successful efforts to secure educational facilities for all, must be credited with the exercise of a powerful influence against deterioration. And, under the circumstances existing in which for more than a year, at least one-third of the wage workers have been idle, and the community has suffered a degree of demoralization that twenty years of war could not have effected, it is not too much to say, that the patience and self-respect that have enabled the suffering classes to bear it without violent and agrarian outbreaks, are to be attributed to the conservative influence of our school system, and not to any special virtue in the policy of concentration of wealth which has resulted from the kind of legislation under consideration. Neither is it too much to say, that a policy which, circumstanced as this country is, makes it possible for the vices or errors of mere dealers in money, or speculators in the industry of the masses to utterly and for so long a time prostrate that industry, is big with rottenness and danger, for the removal of which no remedy can be too heroic.

Another characteristic of the effect of this legislative pandering to the desire of the few to obtain mastery over the many, is the confusion of ideas that is growing in prevalence, as to what constitutes legitimate, and per consequence, honest business pursuits. The door being practically closed to the gratification of honorable ambition in industrial pursuits to all of small means, those whose intellectual activity should make them the leaders of industry as master mechanics, turn their enterprise and inventive genius to devising and discovering means by which they can escape the condition of the worker at insufficient and precarious wages; and out of the material from which the wear and tear of industrial energy should be supplied, spring a horde of leeches who, under guise of brokers, bankers, &c., become what are popularly called dealers in money, shavers, &c., who make their account by speculating in the currency through the hundred devices they have invented, so as to control its price in the market, and load industrial pursuits with all the burden it can bear; and, becoming more rapacious with success, periodically load it down, and bring about panics and prostration like the present.

It is no part of our purpose here to enter into a labored disquisition as to the laws of trade, or the monetary questions that grow out of them; but to make an honest use of statistics for any valuable purpose, so much of the truth must be premised as will illustrate the results reached. We propose then to call attention to two or three propositions that in old fashioned times were held to be true, but that in the new dispensation are, for practical every day purposes, lost sight of:

First. Then, there is no wealth but that which is created by industry applied to production. Therefore, the only producers of wealth are those who labor in the creation of values.

Second. Capital is the surplus product of industry, over and above what it requires for consumption while producing, and the only legitimate use of capital other than the support and maintenance of the owner of it is to aid industry in further production.

Third. Capital while engaged in aiding industry is entitled to some not clearly defined share in the common product. If the share thus conceded to it is of such proportion as industry can give without fainting under the burthen, its use for this purpose is to industry beneficence and strength. But if the share exacted is so great as to weaken industry and lessen its just reward, it becomes oppression and extortion.

Fourth. The form in which capital can be and is made available as an aid to industry is money and this brings us to the question what is money?

Fifth. We might here go into a long disquisition upon the history of money and the various forms and names under which it has been known, yet in all, still, substantially money as we know it; but that would avail nothing, its character is well defined. Money, according to all authorities recognized as valuable and reliable in our civilization, and as defined in the wording and embodied in the theory of all our monetary laws is representative of value, medium of exchange, currency, circulating medium. Each one of these definitions is a natural corollary of the other. Its nature, objects and uses could hardly be so clearly and understandingly put by pages of illustration. Simply tokens representing certain values by common consent to be a convenience in the exchanges of those values one with another.

Now, what are the differences between capital and money that are pertinent to the issue before us? They may be stated thus:

Capital is value created by labor in excess of the amount of value consumed by labor in the process of production; in other words "the surplus production of labor." "Saved up labor." Thus, a man works throughout the year on his farm and produces twice as much as is required for him to live on; the excess of his production is his capital to inure to his only and exclusive benefit. No other persons have any right in it but himself; he may pile it in his barns, bury it in his cellar and thus hoard it without violence to the rights of any others because his possession of it does not interfere with or obstruct the freedom of production of others. There is no law, natural or societary, that puts or seeks to put a limit to the amount that may be produced; on the contrary, all natural considerations and societary influences favor and encourage activity in production. "In the sweat of thy brow shalt thou eat thy bread," is no more a divine than a natural requirement. In obedience to that law no such thing as over-production can be known; and to those who obey that law all the fruits of their industry belong as absolutely and exclusively and as independently of the claims of others upon them as do their lives. But, this farmer requires, in his pursuit of happiness, some things that his farm does not produce. These he seeks to obtain by exchanging his surplus product or capital for the other products he requires with others who produce those other products and who need his, and this is the whole philosophy of trade or commerce between man and man or between nations. As society advances the growth of a disposition to seek greater variety in the enjoyment of life which constitutes better living and higher refinement, leads to greater activity in the exchange of values and to diversity of industries.

This diversity of industries calls for greater activity in the exchange of values, and to facilitate those exchanges, tokens representing values of different quantities are invented and in time come to be called money. These tokens are of different material in different ages and nations, their only essential property being that they shall be accepted by all among whom they are to circulate as representative of the value they bear upon their face. Thus, if A. has a load of hay which is equal in value to a cow and wants a cow in exchange for his hay he may meet B, who wants his hay but has no cow to give in exchange, so that A. must continue his quest until he finds some one who has a cow and wants to exchange her for hay. While B, likewise, must continue to search until he finds some one who has hay that he wants to exchange for the particular article of value that he happens to hold. This is natural exchange. But with the tokens representing value and called money, A. meets B. and they agree upon the value of the hay and B. gives the amount of money tokens that represent the value of the cow A wishes to procure, and, without further trouble takes his hay and uses it, while A, with the representative of value in his pocket proceeds to find some one who has the cow to exchange and with these tokens makes his bargain and receives his cow. This is called buying and selling, and is simply an exchange of values facilitated by the use of the tokens called money. Now, there is no property requisite to enable these money tokens to perform the office for which they were created except that A, B, C or D, may feel certain that if they receive them in exchange for their values, they can use them in buying other values equal in amount to those sold. And this confidence depends not upon the value of the tokens called money, their intrinsic value, but upon the certainty with which they can be converted into other values equal in amount to those for which they were received. It matters not whether the tokens are stamped upon iron, copper, leather, or gold, or printed upon paper; whatever the material of which they are made, still for the use they are intended in the civil and social economy their only legitimate value exists in their interchangeability at a fixed, non-varying, conventionally agreed upon, standard of value. And herein is the difference between money and capital. Capital can be legitimately and beneficially produced *ad infinitum*. It is impossible to create so much value as to impose burdens upon the community. While a greater quantity of one commodity may be produced than is needed for consumption, it is palpable in the nature of things that it can work no evil to the community. For while to those who overproduce, it means working for less returns, to the community it means the enjoyment of the use of that particular commodity at less than its normal cost. This matter of overproduction adjusts itself naturally to the public wants. And this self adjustment constitutes what is called the law of supply and demand. But how is it with money? That being representative of value, not being value in itself, but merely by common consent representing the value of some one commodity as compared with that of other commodities in order to maintain its quality of uniformity, must be limited in its amount. *It is therefore held to be one and the highest prerogative* of all civilized governments, to determine its quantity and regulate its character. In the course of time the nations from which ours has sprung have grown to regard gold and silver as the best material of which to make these tokens of value, because, in consequence of their limited quantity, they are less liable to fluctuation in value than any other material. But it should be noted here, that before this could become a reason for the adoption of these metals as the material upon which to stamp the letters and figures which make a medium of exchange, the powers, purposes, attributes of that medium must have been changed from their original intent. For if their sole use is to aid in the exchange of values, there is no need that they should have intrinsic value; while that intrinsic value would necessarily be detrimental to their usefulness for the purpose designed, by introducing other qualities, powers and characteristics, foreign to or differing from those which constitute them a mere medium to facilitate exchanges. And this is just what did happen. The great usefulness of these tokens of value in facilitating the exchange of commodities one with another gradually brought about an entire cessation of the exchange of values except through their interposition, and as gradually led through their desireability as mediums of exchange to their being regarded and treated as value in themselves and not as representative of value. As a consequence, from time immemorial the nations have gone on regarding the effect as primary, and the cause incidental: the product as of more consequence than the producer: property as more valuable than man: the representative as greater than the principal: money as better than value.

If this idea as practically carried into effect by our customs is the true one, the laws should be made to conform to it. If money is a marketable commodity the individual has as perfect a right to make it as he has to apply his energies to any other pursuit. If it is a commodity to be dealt in, its price to go up or down as other commodities do according to the laws of supply and demand, the government has no more right to arrogate to itself a monopoly in its production and use for its own and favorites benefit, than it has to a monopoly in the production of corn, wheat, coal or any thing else.

If, on the contrary it is what the law and all authority declares it to be, medium of exchange, representative of value, currency created with intent to aid the exchange of values among the people and having no other purpose or legitimate character, the law ought to protect the people against abuses in its use that withdraw it from circulation, and thus embarrass the movements of trade. For, that to such abuses of the functions of money the disastrous depression now afflicting the country, and indeed every other of similar character in this or any other country can be distinctly traced is undoubtedly true.

This power of working mischief by the abuses of the functions of money which consist in treating it and dealing in it as value or marketable commodity, and the difference between it and capital or surplus labor, as to their several natures and powers may be made clear by the following illustration:

B. resides and is doing business in one of our inland business centres, and has in his possession, no matter how obtained so that it is his, one hundred thousand dollars of circulating medium or money. This hundred thousand dollars is that much of the whole volume of circulation that that community has with which to effect its exchanges, or in other words to carry on its business.

B. looks about him with a view to determine the best use to make of this money; he finds upon inquiry that there is a great demand in his neighborhood for horses, and determines to invest his money in the purchase of those animals. He buys them where they are in excess and brings them to his neighborhood at a cost that enables him to sell them at the average price of one hundred and fifty dollars, and after deducting all costs have reasonable profit on them, and that is the price at which he can readily sell them being the equitable market price. But B. upon a survey of the situation believes that horses are sufficiently needed and hard to get, to enable him to force a higher than equitable price upon his neighbors, and to make large profit by taking advantage of their necessities he holds his horses at two hundred dollars each. Now, although this practice on the part of B. is morally unjust and exorbitant, his right to pursue it is unquestionable. For the value of these horses is his capital. It is his property with which he has entire right to do as he pleases and no one else has a right to interfere. They have a right however, to refuse them at his price, and as they can procure them where he did at the same cost, their supply not being arbitrarily limited, they refuse to pay it. Now what is the result? B. holds his horses for his price and they refuse to buy them, and at the end of six months if he could sell them all at two hundred dollars, the loss on them for cost of keeping, and deterioration from sickness, accident &c., would be such that he would not be reimbursed for his outlay. This is dealing in real values, and it is hardly possible to conceive any circumstances under which the most perfect freedom of buying, selling, exchanging or even withholding or hoarding real values or commodities could work permanent or considerable injury to the community or any part of it. The loss from deterioration by waste and accident, and the possibility and even certainty of the place of values withheld or hoarded being filled by further production, constitutes a perfect safeguard to the public against abuses of absolute ownership and freedom of trade.

But is it so, when dealing in the representative of value or money? We are fully aware of the storm of vituperation that will be raised against touching the sacred right of property in money, by those who now control the public policy on questions of finance, *if by any accident it becomes necessary for that class to notice this report at all.* But as we are not writing for their favor, but rather with the hope of clearing away some of the fog and confusion raised by these gentry to mystify the general mind and prevent it attempting to deliberate upon and determine questions of gravest import, that touch the general interest more nearly than any other; without an early solution of which, in the interest of our common humanity, hecatombs of patriots may lay down their lives for an idea; eloquence may exhaust itself in vindication of the dignity and rights of labor; the nation may shout itself hoarse over the triumph of government of the people, by the people, and for the people; and yet in spite of it all, men will starve, degenerate, and freedom will die. Inasmuch as this is our purpose, we propose to answer this question: Is it so, when dealing in representative of value or money, as we deal in other commodities? Let us see. Our illustration of B dealing in horses, showed that greed and avarice in dealing in values, is estopped from working mischief by the destruction of interest that follows the attempt to forestall; and that B, dealing in horses, or others dealing in any other values, are forced by natural conditions to deal with at least some approximation to fairness in order to secure their own profit and even capital. Now, we will look at the obverse of the picture. B, having his one hundred thousand dollars, and anxious, as he naturally is, to make the most of it, observes that those who have money and use it for loaning to others who take all the risks of profit or loss in business, prove to be most secure of their profits, determines that he will not invest his money in manufacturing, mining, farming, or any of the productive pursuits, but will become a private banker, street broker, or whatever other name this class are known by in the various business centres. He therefore offers his money on rent or loan, to those who are engaged in productive enterprises, and who need to borrow capital to aid them in their operations. Common consent and the laws, say that five or six or seven per cent. is the fair, normal, equitable wages that money may earn without overloading industry, and this industry is willing and glad to pay. But, under the theories prevailing, B has as absolute and complete right in his money as he would have in horses, grain, coal, manufacturing establishments, or anything else that is real value, and the only question that enters into his calculations is, in what way he can secure the largest returns for the use of his money, with the least risk of loss He therefore puts his money where he can lay his hand upon it at any time, and waits until his neighbors, who are engaged in operations adding to the general wealth, ask for the use of it His disposition is the same now as it was when he bought his horses. He is not willing to receive the equitable, just compensation that experience has fixed as the just compensation for the use of money, not because it is not sufficient compensation, but because he thinks he can get more. He, therefore, when approached by any one and asked for a loan, considers first the sufficiency of the security. This being satisfactory, the next consideration is, not what equity and fair dealing fixes as the charge he should make for the use of it, but how much the necessities of the borrower may force him to pay; and this necessity is the measure of the market price or value (as financiers of this class call it) of money. It may be nine, ten, twelve, fifteen, even thirty per cent., depending entirely upon the amount of money asking employment in the market, as compared with the amount of the demand for it. Inasmuch as B is here to illustrate the whole money lending interest, and their effect upon trade, we assume that the hundred thousand dollars he holds is a sufficient proportion of all the *currency* in the market, to enable him, if he withholds it from circulation for any reason, to create such a stringency or scarcity of money, that in order to keep business going, his industrial neighbors must pay just what he asks for its use or go without. Now, what does going without mean to these producing neighbors? Simply failure to meet their wage's roll on pay day, protested bills in bank, loss of credit in the supply market, bankruptcy. What does compliance with the exorbitant demand mean to the producing neighbor? Simply paying the profit of his business to the capitalist for the use of currency to carry it on with, anxiety and care that affects his disposition and his health, necessity for making up the forced depletion by reducing expenses wherever they can be reached, reduction after reduction in the rates of wages paid, consequent ruinous contests, strikes and suspensions of production, gradual impoverishment, postponement of bill paying, loss of credit, and bankruptcy that carries loss to every interest to which and to whom he is indebted. But what is the effect upon the man who by dealing in money as if it were value, maintains this control over the fortunes of the useful classes by controlling the movements of the currency? Simply this: If those useful classes refuse to submit to his extortion of ten, twelve, fifteen, eighteen or thirty per cent., he puts his money in any one of the hundreds of investments that grow out of the pestiferous theory that justifies and makes respectable his robbery of industry, lets it lie there producing its certain though smaller profits, until his operations have resulted in industrial ruin, when he quietly removes it and makes twenty, thirty or fifty per cent. by buying up the depreciated values of those whose ruin lies at his door. If they accept his terms the final result is the same. The bankruptcy and ruin is sure to come in either event, with the same general results.

For the purpose of this exposition, it matters not whether B is an individual operating within a limited sphere, where his capital, put in the form of money, constitutes a sufficiently large proportion of the whole circulation to effect a stringency in the supply by its withdrawal from circulation, or whether he represents the whole of that honorable class who, making the effect of the various monetary dealings the study of their lives, are known under the *generic* title of financiers, the result in both cases is the same.

And this is what we call our periodical revulsions in trade, that those wiseacres who assume to lead the people, content themselves with saying have always been, and, in the nature of things, always will and must be; who admit that money is not value, but only its representative, but deplore the fact that time out of mind it has been dealt in as value, and because our fathers were unwise or weak, we must continue so; and who, when confronted with the question so pregnant with great results for weal or woe, cower and shrink from a contest with the cormorants who are eating the vitality out of our civilization prate about the sacred rights of property, and promise the suffering masses that when this generation has passed away in misery, privation and degradation, some indefinable accident or circumstance is to revive trade and give our successors a few years out of their lives of a feverish, fitful, fleeting prosperity, and say that we must accept the situation as philosophically as we can, and without adopting any measures to bring it about, wait in faith and patience for the good time coming.

How is it that men who can readily compute the difference between two and four, who can talk and write by the hour and week most learnedly and *unmeaningly* about the laws of trade, and denounce, with lofty disdain and bitter invective, as "mischievous busy bodies and communists," those who desire that attention shall be given to the plea of suffering industry for a hearing: how is it that these haughty dictators of public opinion cannot see the difference between freedom of commerce in values and freedom of commerce in money: between absolute ownership by the producer of the product of the labor of his hands, which every person is equally free to create by his toil, and which, therefore, cannot be monopolized except by the abuse of money, and the absolute ownership of the circulating medium which no individual can make without being liable to the pains and penalties provided against counterfeiting; circulating medium made and furnished exclusively by the Government as the highest exercise of its sovereignty; furnished in arbitrarily limited quantities, distinctly and explicitly to facilitate exchanges; which while used and treated as such is an unalloyed help and beneficence; but when diverted from this, its purpose, an unmitigated curse, furnishing the appliance by which the rewards of industry are seized by those who do not toil? When recognized as circulation and not as value, it is the means by which the selfishness of human nature may be toned up to a noble ambition to add to the general stock of comfort and enlightenment; when recognized as value, it is the temptation to, and inspiration of every rapacious disregard of public right and private virtue, dividing the state into the three classes of luxurious, cruel and despotic extortioners; well fed, servile, mercenary timeservers; and half rebellious, half submissive, half starved serfs.

While money is held to be a representative of value, or retains any of the characteristics with which the law and our civilization clothes it, the charging of more than the conventially fixed rates for the use of the value or capital it represents, is as much an act of flagrant robbery, despite the halo of respectability that custom and immunity throws around it, as the seizing by force and arms would be. The practice is the outgrowth of that natural selfishness and greed of power in man, that led him in the state of barbarism to prey upon his fellows; that in the infancy of civilization, turned the hand of the strong against the weak, and then against each other, until by conquest and compromise the strongest was put at the top, with the rest graded in accordance with their several powers in the several ranks of nobility around him, and kingdoms were founded. What avails it to the betterment of the condition of humanity, if, under the inspiration of christianity, we have overthrown monarchies, and erected republics founded upon theories drawn from that inspiration; while, regardless of its teachings, we permit the same social war to continue, merely substituting money wrenched from its original purpose and uses, for the sword of the freebooter? Can any one believe that free government can continue to exist, while the rewards of industry are wrested from the industrial classes, and distributed among those who do not produce at all; and among these, the largest portion going to the class the furthest removed from the producer, while to those whose hands, and ingenuity, and labor, actually create all values, all is filched except just what will maintain them in working condition, the measure of their compensation being practically held to be the dead level of starvation wages? It has been said (so completely is the truth of these premises confessed) that he who will devise a means by which the interest charged upon borrowed capital for industrial uses will not exceed six per cent., and at the same time, keep the supply sufficient," would be worthy of a monument in gold." Now we are not writing with a view to earning this monument, for we do not claim to be financial experts, even in the degraded sense, and upon the low plane alike of morality and intelligence on which reasoning on that subject is made to rest; but with an honest desire to fix attention upon some of the primary and indisputable facts, that, glossed over and hidden by the mistifications and unmeaning generalities that are so well adapted and so pertinaciously applied to frighten the public mind from the contemplation of the subject, are lost sight of in all discussions of the topic whether by President, representative, journalist or pamphleteer.

From the premises we have tried to make clear, these points may be regarded as unquestionable:

First.—Capital is the result of industry, and consists of the values produced over and above the amount of those values consumed in their production. And this value is rightfully, and with entire safety to others, the exclusive property of those who produce it, or of their heirs or assigns, and may be created *ad libitum.*

Second.—The owner of capital, if the use of it is asked for by others in aid of their industry, is entitled to some compensation for its use, the amount of which compensation is a question which has been held to come properly within the purview of the authorities who represent the sovereignty of the people to be determined and fixed by statutory decree. This compensation is called interest.

Third.—As a part of the prerogative of ownership, the holder may loan his capital or withhold it, as he elects. For while, as a part of the body politic, it is his duty and interest to use his means, as without injury to his own interests to advance those of all, yet as compulsory loans for other than public purposes would be a restriction of his right of absolute ownership, and so weaken the incitement to industry, the instincts of civilization, acting upon reasons growing out of the experience of ages, leaves the owner of capital to accept the inducements offered for its use or to reject them, as he may elect; because, if he does the latter, all others are free to and will create values to supply the place of his, and his lack of sympathy with his fellows, or miserly unwisdom, will leave him alone among men, while society moves on as independently of him and as unaffected by him as if he were no part of it.

Fourth.—Money, from time immemorial, has been the medium through which men have made their exchanges of values, and in our civilization, while in practice little if any progress has been made, in theory its character and uses have come to be clearly and distinctly defined as representative of value for a medium of exchange or currency.

Fifth.—Unlike capital, money is not value, being only representative of value for a purpose, as above defined. It is not a commodity to be produced *ad libitum.* Its quantity or volume is determined and limited by the sovereign authority. The same authority also regulates the currency, defines not only the amount and conditions under which it shall circulate, but the material of which it shall be made. The individual who attempts to increase the supply by the same application of labor and ingenuity, as he not only may but is encouraged to apply to the creation of values, corn, wheat, wagons, steam engines, or anything else, is obnoxious to the pains and penalties provided for the punishment of counterfeiting.

Sixth.—This being the undisputably true definition of money, it follows as certainly that using it as value, dealing in it as a commodity, must produce very different effects upon the interests of the community from those following dealing in real values. Money having grown to be the only medium in the exchanges of values, and being supplied in limited quantities for that purpose, it is necessary that to secure the benefits intended to be derived from its use in the steady sufficiency of the supply and the uniformity of its representative value, it should be used for that purpose, and for no other. Therefore,

Seventh.—While a capitalist possessed of half a million of dollars worth of wheat, and withholding it from sale or exchange, can make but a very slight and ephemeral disturbance of the relations of trade, and will certainly lose by deterioration and loss of place in the market, by stimulating the production of wheat much more himself than any loss he can inflict on his fellows; yet, if he sells his wheat, and having received half a million of circulating medium for it refuses to purchase other values with it at prevailing prices, or to loan it at the rates fixed by law, because they are adjudged to be the normal and equitable rates and which the law should fix and enforce, because it reserves to itself the sole power of creating and regulating the currency, he will, by such hoarding or withholding from circulation this amount of money, by the stringency he so creates, force up the cost of its use, unsettle values, disturb the movements of trade, paralyze industry and breed panic, confusion and ruin, less or more limited in extent or wide-spread, just in proportion as the amount of circulation withheld is a less or greater proportion of the whole volume of the currency furnished.

The inevitable conclusion then reached by anything like honest reasoning is, that the government should see to it that the currency is used as currency, and not as value. The authority reposed in it to regulate the currency, imposes upon it the duty to protect the useful classes of society against the glaring and atrocious violations of the laws of equity and fair dealing in this direction, by which the industrious laborers and the honorable industrial business men of the country are driven from their high estate as the missionaries of a noble progress, and made the mere tenders to a horde of rapacious usurers, stock and money gamblers, speculators in other men's earnings and creators of monopolies and false values, who are rapidly absorbing the richest heritage God ever gave to a people, and driving that people out by thousands as wandering *nomads*, vainly seeking leave to toil for bread, in the midst of plenty that would have put to shame the Hebrews' promised land.

By every consideration of fair deduction, this looks us fully and fairly in the face as the point at which to begin reform. Money withheld from circulation for the purpose of affecting prices of values or rates of interest, should be by legislation, backed by effective execution, declared forfeited and confiscated. The robber who steals a horse or a watch is not permitted to profit by his crime, yet all the offenses in the calendar of crimes since the organization of the country have not produced so much mischief and demoralization as has been inflicted upon it in the last eighteen months, as a consequence of the abuses growing out of dealing in money as a commodity.

It is time, full time that the wretched twaddle of statesmen and journalists about expansion, contraction, coin or paper came to an end, and that they meet the "impending crisis" honestly and courageously. A few years more and it will be too late for peaceful and orderly solution. Let us by reference to notorious facts look at the effect produced. One of the leading citizens of the western part of the State, who is a large holder of suburban improved property, says that "no one in his neighborhood expects to borrow money at less than ten per cent., even on real estate mortgage," and that "the cost of discounts on paper, notes and bills or drafts, at from thirty days to four months, what with the interest (at legal rates) allowance to cover taxation, exchange, re-exchange, &c., the rates will range from seven to nine per cent. in the National banks, and this for the very best commercial paper." Now, when there is added to this the other well known fact that a general rule prevails that a dealer with the bank is expected to keep to his credit a line of deposits, approximating in a greater or less degree, the line of his discounts, it can very readily be seen that the assertion of Representative Mitchell, of Tioga, in debate last winter on the usury laws, that "the average cost to industry for discounts in the National banks is at least ten per cent.," is not in excess of the truth, if it is not under it.

Then, again, we have the State banks, the savings banks, trust companies, &c., whose usual charges must be largely in excess of these; for as much as the Comptroller of the Currency has been compelled to note in his report for 1872, page 27, under the caption "Savings Banks," that savings banks in some portions of New England, New York and Pennsylvania, as well as other States, have recently become formidable competitors of the National banks, by offering much larger rates of interest for deposits than is usual in well regulated banks, and "for the purpose of attracting the deposits of business men and others, * * * the custom prevails, to a large extent, of offering high rates of interest for deposits before dividends have been earned." * * * "The result is that savings deposits are, to a considerable extent, endangered by investments in street paper, *in loans to the managers of such institutions*, and in speculative securities." Beside this evidence of the Comptroller of the Currency, there is abundant evidence that the rates in these institutions are much higher than in the National banks. One fact we will mention in illustration. In the summer of 1873, we were discussing with a member elect of the present Congress, on the street of one of our inland industrial towns, this question of the inequitable distribution of the rewards of industry, and had mentioned the fact that our investigations had shown that the average income of workmen was under $450 per year, and the difficulty of reconciling that result with the assertion of an eminent statistician, that "seventy out of every hundred of those who go into industrial enterprises, with capital ranging from five thousand to fifty thousand dollars, fail," and asked his opinion as to the correctness of the latter statement. He said he believed the estimate was fully within the truth, and proceeded, as nearly as we can recall his words, as follows: "All the appliances promising, and which were intended by legislation to aid industry and facilitate the distribution of its rewards, are wrested from their purpose, and turned into instrumentalities of oppression and extortion by the inexorable spirit of competition and brutal lust of gain, that through our financial legislation and customs have become the leading characteristics of our business activities. Practices in usury, that fifty years since would have consigned the man engaging in them to exclusion from the recognition of honorable men, have become so common, so shameless and so successful, that the public sense of honor cowers in the presence of greed, made bold and aggressive by immunity from penalty. You need not go far to find the reason why seventy out of every hundred who enter upon industrial enterprises with small capital come to grief, or why the average income of those whose only capital is their brains and sinews will not reach $450 per year, while the most economical estimate of the cost of the decent maintenance of a family cannot be brought within six hundred dollars per year. All you have to do is to look across the street at that building with the sign "Savings Bank" on the frosted glass of its windows; that is an institution chartered by the State for the ostensible purpose of encouraging the working classes to husband their resources. They can deposit their savings there at low interest in small sums, relieved of the difficulty of finding small investments. The difference between the low rates paid and the legal rates they should receive are adjudged to be about sufficient to cover expenses. Their charters are applied for and granted, as to semi-benevolent institutions; yet, in a five years' practice at the bar of this county, I have come to know that the first time a producer borrows money there is the beginning of the end to him, and that his failure sooner or later is as sure as anything can be, except death and taxes." The venerable Benjamin Bannan, late editor of the *Miners' Journal*, told us last year "that it was within his knowledge that one bank (a State bank) had made such enormous profits by these practices that, to avoid attracting attention to the matter, they, at least on one occasion, disposed a large amount of their funds among the directors or stockholders, *for the purpose of reducing the apparent profits or dividends down to ten per cent. for the half year.* The records of nearly, if not quite, every county court in the State will show the prevalence of the practice of taking enormous usuries in the form of "*bonus*" and interest on bonus, in suits for the recovery of judgements on "cut throat" notes and other forms of *confessed* judgments, bonds and even mortgages, in which the defence has plead usury as a set off, and had it allowed. Of course there is no means of estimating how many, or to what amount persons are extorted upon in this manner, but the frequency of such pleas being made good, and the fact that one who makes such a plea places an obstacle in the way of his borrowing again, shows indubitably that the practice is common and general. It is regarded as entirely within the limits of truth to estimate the average discounts in these two classes of institutions at fifteen per cent. per annum.

The next class of money dealers and generally the most rapacious, are those who are classed as private bankers, street and pawn brokers, and the horde of unprofessional money lenders who infest all centers of business activity and lie in wait to take advantage of the necessities and sometimes ignorance of their neighbors. Two instances are within our knowledge that illustrate the methods of their transactions. The first was a practising lawyer who was applied to by the widow of a deceased client who wished to borrow five hundred dollars to complete the purchase of a house she was buying with the proceeds of a policy upon her husband's life. He told her he could get it for her, but she would have to pay one and a half per cent. per month for it as money was hard to get. She wanted the money for a year and acquiesced in his terms. The result was that she signed a "cut throat" note to this effect. One year after date she was to pay to the lender five hundred and ninety dollars with interest at six per cent from date with confession of judgment, and waiver of the benefit of all laws exempting property from sale, &c, and of stay of execution, and with five per cent fee for cost of collection.

At the time of payment she refused to pay the collection fee, on the ground that she had paid the lawyer twenty dollars for his services at the time of the transaction. He sued on the judgment, and she made her defence good, judgment being rendered for the face of the note, $590 00, and six per cent. interest, $35 40, the collection fee being dropped because it was proved to have been once paid. Of course, had she plead usury, she could have escaped the payment of the ninety dollars and interest on it; but she either did not know this, or was controlled by her sense of the sanctity of her contract. In this transaction the discount charged is seen to have been 30 per cent.

The second was a similar note payable at sixty days for sixty dollars. This was taken by a pawnbroker, for which he charged, and was paid *five dollars*, just fifty per cent. And we are credibly informed that this is rather under than over their usual rates. We estimate the average rates of these last named classes at thirty per cent.

Now, to show the extent of the burden of these drafts upon the productive energies of the State, it is only necessary to approximate as nearly as may be to the amount of paper discounted in the State in a year.

Taking the report of the Comptroller of the Currency for 1872, as a guide, after making allowance for the percentage of annual increase, we find the average amounts of discounted paper in the United States banks of this State for each quarter of the year 1870, to have been $86,849,078 74. The average time of these discounts we put at ninety days, and the total amount for the year would be $347,360,314 16, the interest at ten per cent. would be $34,736,034 49.

Of State and savings banks, taking the Auditor General's report for 1873, and making due allowance for increase, &c., the line of discounts for 1870, would stand at $17,566,487 92. We estimate their average time at sixty days, and this will give for the year, $105,398,927 52. Interest at fifteen per cent., $15,809,839 12. Of all other kind of money lenders, as private bankers, street and pawnbrokers, and characters like that we have given an illustration of, Mr. Bigham estimates the resources to be $125,000,000, this is below the usual estimate, most writers, among them Henry C. Carey, putting them much higher ; for the purpose in view, we estimate the time of their paper also at sixty days' average, though it is probably much shorter, and at an average rate of 30 per cent. interest. This would make their annual discounts $361,175,781 96, and interest on them $108,352,744 58. These give a total amount of discounts in this State for 1870, of $813,935,024 44, at an average cost to industry of 19.5 per cent. on the discounts, amounting to $158,898,615 19, as drawn from production to pay for the use of capital. If six per cent. is a fair rate of interest, and that had been the average the sum would be $48,835,901 46.

If our estimates are near the truth, this is an excess of $110,062,713 70. For every man, woman and child in the State that year, $31 25 ; for every one of the 1,020,544 persons in all occupations, $107 84. To show the effect of this drain upon industry of 13.5 per cent. above legal or equitable rates, it is only necessary to refer to some of the statistics of industry in the census. Under the head of "mechanical and manufacturing industries," "Table IX. (B.) The State of Pennsylvania. By industries." The United States census report gives the following totals, viz :

All industries—Number of establishments		37,200
Total hands employed		319,487
Males above 16	256,543	
Females above 15	43,712	
Youth	19,232	
Capital employed		$406,821,845
Wages paid		127,976,594
Materials, (cost of,)		421,197,673
Products, (value of,)		711,894,344

Deduct from the total product the total cost of materials, and six per cent. interest on the capital invested, and estimate two proprietors to each establishment, to make up for cost of superintendance and other expenses that may not be included in the return of material, (which is a liberal margin,) and we have, for every man, woman and child engaged in these industries, the annual income of $676.

Or, suppose the earnings of females and youth go to swell the income of families, as they usually do, and in making up the account, estimate the value of their earnings as three women and youth to one full wage worker, (the usual estimate,) and we have, as a result, $756 as the share annually of every adult engaged in these industries, or as the average income of families. Now, let us take from the apparent profits, as we have thus found them, this 13.5 per cent. excess of interest, and see what it shows then. In the first place, it gives to each man, woman and child, engaged in these industries, still counting two proprietors to each establishment, $559 39 per year, against $676 at six per cent. Or, reckoning the females and youth as three to each full earner, it gives to each family, dependant on them, $627 28 per year, against $756 at six per cent. Let us see if we cannot make use of these figures in another shape, that will make plainer still the amount and effect of this burden of usury upon industry.

Thus: Allowing six per cent. upon the capital employed, and deducting that six per cent and the cost of materials from the total product, we have as apparent creation of wealth for the year in manufacturing $266,287,411. Of this amount, as per census, there is paid to wages account $127,976,594, leaving as apparent profit to the proprietors the amount of $138,310,817, or to each establishment in these industries incomes of $3,712 65. Now, when we reflect that at least 75 out of every 100 of these are small establishments, in which the hands employed do not number more than from one to six, and in which the incomes certainly do not exceed $1,200 per year average, this extravagant showing of profit will be at least remarkable. With a return of wages paid that only shows an average income to each wage worker's family of $462 25 per year, if it could once be demonstrated that employers enjoyed average incomes of $3,712 65, and intrigued and contested by lock-outs and association to resist the demand for an advance of 10 or 20 per cent. upon the pittance their workmen receive, the manifest injustice and selfishness or worse, of such a course would bring upon them such a storm of general indignation as would inevitably defeat the effort. But this is not true. Its falsity is absolutely proved by the fact that long and damaging suspensions are constantly occurring in resistance of such demands for increase of wages, in which the losses to proprietors prove fatal to their success as business men. As men who have such capacity as to enable them to become proprietors cannot be reckoned as consumate ignoramuses, it cannot be supposed that they would sacrifice such magnificent profits in resistance to so small a reduction of them as such a concession would be. These facts we regard as strong corroboration of the substantial correctness of our information and estimates.

Now let us see what results are reached on the basis of our estimates of the average rates of interest paid by production. In the foregoing exhibit we have added to the expenses the legal rate of interest. There may be, and most likely are other items of expense or leaks not included in the census report or in our calculations, but certainly none that would materially affect the result. We now reduce the apparent profit in these industries by the remaining 13.5 per cent. of the 19.5 per cent. we estimate as the average cost for usury.

This 13.5 per cent. on the capital invested in these industries amounted to $54,920,949, leaving as the apparent profit to production in them $83,389,868, or as the apparent income of each of these, 37,200 establishments, $2,241 66.

This, doubtless, is very near the truth. That a few exceptional establishments had incomes largely in excess of this, of course is true ; but as we have before remarked, the vast majority—a greater proportion, certainly, than three-fourths, cannot be put at more than an average of $1,200. All the indications point to this conclusion. Notice that many of the larger establishments, the proprietors of which make a display of wealth that is inconsistent with these figures, are connected through those proprietors with banking institutions and participate in their profits. Also that the necessity for borrowing falls upon the operator with small capital, and is such a drain upon his resources that he is frequently driven to the wall in his attempts to struggle against his fate, and sinks at last to become the wage worker to some giant corporation, where an aggregation of capital relieves it of this burden of usury. And further, that this aggregation of capital, encouraged inordinately by the legislation that has prevailed during the last fifteen years, has been and still is rapidly absorbing the development of our great industrial resources, as iron, coal and the more prominent manufactures, adding its competitive power to the obstacles in the way of individual enterprise ; and we think that no one, upon reflection, will see cause to doubt the approximate correctness of these general results.

We have sought carefully for data upon which to base an estimate of the number of persons whose entire or chief income is derived from dealing in money in this State, and although no inquiry could be more difficult to pursue we believe we are not far wrong in putting the number at 2,000. This is not intended to include the subordinate officers or clerks in banks and banking houses but only those who as principals participate in the profits and the number is not far from the mark.

We have then as the actual distribution of the rewards of industry in this State the following certainly not flattering exhibit.

2,000 dealers in money average income, less expenses for clerking, &c., each	$27,460 47
37,200 manufacturing establishments average incomes each	2,241 66
277,524 manufacturing wage workers, adult males or full earners incomes each	461 10

Of course we do not claim that this exhibit presents the facts with mathematical exactness, but every thoughtful and observant person can see from our data and his own experience that it is not far from the truth.

In further illustration we have prepared the following table as showing the distribution of the proceeds of industry in 1870, taking from the census return of mechanical and manufacturing industries for Pennsylvania over one hundred of the representative occupations returned, being all that are given as employing five hundred hands and upward.

In this table we have estimated as nearly as our judgment, aided by general knowledge would admit the probable cost of incidental expenses not returned in the cost of materials.

The first column shows the number of establishments returned.

The second column shows the average number of hands to each establishment.

The third column shows the estimated incidental expenses.

The fourth column shows the percentage of incidental expenses in the total product after deducting material.

The fifth column shows the average earnings of hands for the year, counting the females and youth as three to one full earner.

The sixth column shows the percentage of wages in the total product after deducting material.

The seventh column shows the apparent average income of each establishment after deducting cost of material, incidental expenses, wages, and eighteen per cent. calculated on the product, after deducting material for discounts.

The eighth column shows the percentage of income of establishments calculated on the product after deducting material.

The ninth column shows the apparent forfeit on the capital investment after deducting incidental expenses, cost of material, wages, and eighteen per cent. on the product less material for discounts.

In making up this table we have put the average rate of interest at eighteen per cent. for greater convenience in the calculations.

MECHANICAL AND MANUFACTURING INDUSTRIES.

MECHANICAL AND MANUFACTURING INDUSTRIES.	No. of establishments in each occupation..........	No. of hands in each trade, count'g three women and one youth to one full wage worker	Average No. of hands to each establishment......	Estimated average cost of incidental expenses to each establishment......	Per cent. of incidentals...	Average earnings of hands for the year..............	Percentage of wages in product, after deducting materials................	Apparent income of each establishm't, after deducting incidental expenses, material, wages and 18 per cent. discounts.......	Percentage of profit in product, after deducting material................	Apparent profit on capital,
Agricultural implements..................................	286	2,261	7.9	$663 91	8	$453 61	43.2	$2,555 12	30.8	21.5
Bleaching and dyeing......................................	79	733	9.3	1,516 17	10	481 42	29.5	6,449 28	42.5	41.
Book binding..................	91	1,246	14.7	1,833 67	10	541 13	40.4	5,793 06	31.6	32.1
Boots and shoes..	3,949	13,966	3.5	251 04	10	345 04	48.6	587 21	23.4	36.3
Boxes—Cigar, packing, paper and wooden................	104	794	7.6	784 77	10	451 88	44.	2,200 40	28.	51.1
Brass, founding, finishing, rolled and ware...............	68	848	12.5	1,450 63	10	501 34	43.1	4,192 52	28.9	12.9
Bread, crackers, and other bakery products...............	809	2,364	2.8	296 86	10	331 39	32.6	1,169 03	39.4	49.2
Brick...	458	6,637	12.3	991 41	10	352 22	51.5	2,034 06	20.5	20.4
Brushes..	61	490	8.	544 44	10	367 94	54.3	964 36	17.7	13.5
Carpentering and building................................	1,846	10,470	5.5	734 78	10	509 57	39.3	2,400 35	32.7	57.7
Carpets, rag and other....................................	396	4,554	11.5	1,098 94	10	424 59	44.4	3,029 57	27.6	37.5
Carriages, wagons...	1,449	6,217	4.3	315 45	10	358 60	48.8	732 66	23.2	24.5
Cars, freight and passenger...............................	49	4,005	81.7	3,566 64	5	547 77	63.5	9,524 64	13.5	12.4
Clothing, men's, women's and children's	1,538	11,647	7.5	685 35	10	432 75	47.8	1,657 36	24.2	24.5
Coal oil, rectified	89	940	10.5	3,264 41	10	679 34	22.	16,328 65	50.	36.2
Confectionary..	268	928	3.4	483 38	10	420 83	30.1	2,023 17	41.9	47.9
Cooperage	474	2,199	4.6	360 11	10	429 94	55.4	598 21	16.6	26.1
Cotton goods, (all kinds grouped)	143	6,841	47.8	2,845 68	6	513 16	51.5	11,673 34	24.5	13.3
Drugs and chemicals	82	1,633	19.9	3,786 77	10	506 21	26.6	17,183 85	45.4	23.2
Edge-tools and axes.......................................	20	599	29.9	1,064 05	4	641 31	72.2	1,541 89	5.8	4.2
Flouring and grist mill products..........................	2,985	6,409	2.2	258 42	10	199 43	16.6	1,432 23	55.4	20.9
Furniture, (all kinds grouped)............................	948	5,534	5.8	554 47	10	439 26	46.2	1,428 04	25.8	26.
Gas..	43	1,533	35.7	6,097 82	10	806 76	47.2	15,142 22	24.8	5.7
Gasometers and lamps, and lamp fixtures.................	10	876	87.6	4,754 16	6	511 38	56.5	15,419 13	19.5	13.2
Glass, cut, stained, ware and window	58	4,958	85.5	6,260 15	6	714 91	58.6	18,181 94	17.4	16.3
Hardware, and saddlery hardware.........................	87	1,004	11.5	1,111 58	10	488 35	50.7	2,367 64	21.3	18.3

Hats and caps	81	1,212	14.9	1,669 66	8	580 10	44.9	5,548 24	29.1	43.9
Hosiery	76	2,516	33.	3,133 30	10	508 85	53.8	5,662 47	18.2	14.5
Iron, (all kinds grouped)	923	47,483	51.4	3,733 72	8	544 32	59.4	6,871 28	14.6	7.8
Jewelry	77	737	7.8	1,338 33	10	562 65	40.2	4,250 61	31.8	34.2
Leather, (all kinds grouped)	1,495	6,729	4.5	542 23	10	384 55	32.	2,173 19	40.	21.2
Liquors, (all kinds grouped)	356	2,097	5.9	1,736 09	10	473 70	16.1	9,709 57	55.9	33.3
Looking glass and picture frames	47	598	12.7	1,881 74	10	535 88	46.9	3,666 35	31.8	29.5
Lumber, (all kinds grouped)	3,922	19,156	4.9	414 08	10	324 72	38.3	1,395 37	33.7	19.7
Machinery, (all kinds grouped)	477	17,439	36.5	1,977 98	6	570 79	63.3	4,228 17	12.7	7.9
Marble	308	2,645	8.6	915 02	10	520 88	48.9	2,111 73	23.1	21.1
Masonry	272	1,206	4.4	239 81	10	295 24	54.6	417 54	17.4	85.6
Millinery	238	492	2.	231 30	10	405 92	36.3	826 29	35.7	37.2
Molasses, (all kinds grouped)	41	1,345	32.8	5,679 41	10	495 95	28.7	24,622 14	43.3	17.9
Painting	403	1,763	4.4	384 05	10	428 92	48.8	888 81	23.2	52.3
Paints	36	727	20.2	4,029 52	8	498 48	20.	27,202 06	54.	32.1
Paper	78	1,597	20.2	2,987 43	10	469 09	32.	11,988 33	40.	19.4
Plastering	106	496	3.8	333 93	10	407 61	57.1	497 03	14.9	53.5
Plumbing	218	1,098	5.	549 96	10	445 17	40.7	1,720 86	31.3	43.5
Printing cotton goods, &c	7	669	95.6	9,896 78	6	528 22	30.6	74,876 32	45.4	30.9
Do....books, newspapers, &c., publishing	307	4,776	15.5	2,796 78	10	669 10	37.6	9,493 00	34.4	27.3
Roofing materials	58	907	15.6	1,228 05	10	440 91	56.2	1,945 59	15.8	8.2
Sash, windows, doors, &c	204	2,689	13.1	1,441 04	10	534 60	48.9	3,228 76	23.1	19.3
Saws	11	633	57.5	3,820 36	6	724 29	65.7	6,529 68	10.3	7.7
Ship-building	106	2,161	21.3	1,013 11	6	492 95	59.5	2,783 16	16.5	18.9
Silk goods	10	489	48.9	4,283 00	6	667 48	45.7	21,614 57	30.3	15.1
Soap and candles	96	667	6.9	1,444 90	10	451 79	21.8	7,264 28	50.2	32.8
Steel, Bessemer—cast, forged and springs	28	1,979	70.7	12,260 88	10	668 58	38.5	41,023 56	33.5	21.7
Stereotyping and electrotyping	11	497	45.2	5,850 45	10	645 74	49.9	13,856 54	22.1	15.1
Stone and earthenware	198	1,262	6.4	568 15	10	355 24	39.9	1,826 47	32.1	24.4
Tin, copper and sheet-iron ware	974	3,420	3.5	296 51	10	352 71	41.8	896 43	30.2	27.2
Tobacco, cigars	975	4,564	4.7	337 86	10	319 97	44.3	934 82	27.7	46.3
Umbrellas and canes	27	653	24.2	3,695 80	10	525 66	34.4	13,896 49	37.6	36.8
Upholstery	95	516	5.4	734 58	10	411 17	30.4	3,055 68	41.6	42.2
Wood, turned, carved, and work miscellaneous	164	951	5.8	539 23	10	401 12	43.1	1,556 44	28.9	39.2
Woolen goods	403	7,992	19.8	2,490 33	10	543 05	43.3	7,161 01	28.7	20.5
Worsted goods	31	2,168	69.9	5,709 86	6	628 84	46.2	28,346 46	29.8	26.2
Totals and general averages	29,249	246,015	.....	....	9.8	473 12	40.9	2,379 10	31.3	28.5

It will be observed that in this table we base all our calculations upon the amount produced in the occupations given, in the time for which the returns are made Therefore, the cost of materials are deducted from the total product, and the percentages are calculated upon the remainder. The 18 per cent. discounts are also calculated upon this remainder, rather than upon the capital, because for obvious reasons we believe it represents more nearly the average volume of the line of discounts as demonstrated from the data already referred to. The proportions given as the result of the calculations are big with significance as bearing upon the subject we are discussing. Of the products of industry for the year, it is thus seen that leaving the 9.8 per cent allowance for incidental expenses out of the account, 246,015 workingmen receive 40.9 per cent.; while 29,249 establishments where labor is employed receive 31.3 per cent.; while capital in its various forms, as of profit on money invested, 28.5 per cent., and discounts on business paper, rendered necessary to the business man by that dealing in currency as a commodity which we have been deprecating, 18 per cent. Showing, as the share capital receives out of the rewards, or product of industry, 46.5 per cent. We have already given the estimated number of of those who deal in money in the State at two thousand. Let any fair minded thinker contemplate these results even for a few moments; not with a view to find some captious, hyprocritical plea upon which to pooh! pooh! them out of sight because they are unpleasant; but honestly and bravely, with a resolve to fathom the real truth and courage to confront it, and see if he does not feel in all their ghastly insincerity the wretched twaddle and driveling fatuity of the manner in which questions of finance are discussed from President's messages down through all the grades of the tenders to the money kings, even to the journals that will shout *pœans* in honor of cent per cent. Shylocks for the small patronage of a twenty dollar a year advertisement.

But the wretched failure to secure equitable distribution, through the kind of legislation inspired by the theories that prevail over common sense, among those whose opinions control the character of that legislation, and still stronger demonstration of the truth of our position, is found if we remove from the foregoing tables, those occupations in which the very large incomes and small proportionate percentage of profits on capital invested, show the possession in the operators of capital in sufficient amounts either as corporations or wealthy firms, to place them generally above the necessity of borrowing at usurious rates. A glance over the table will show to any one which these are, and their elimination from the table leaves as the average incomes of the remaining establishments about $1,900 per year.

But it is needless and would be useless to extend the illustration of the manner in which the rewards of industry are distributed further.

Those who have sufficient sincerity to desire, and sufficient courage to seek, a solution of the problem of social reform, who are not so wedded to the leadership of the money kings that they are unwilling even to inquire whether change is needed, will find sufficient as it is to aid them in their inquiries. As for the rest, were the subject held before them, arrayed in the clearness of a sun-beam, they would not see it nor look at it; but, ostrich like, hiding their heads under the bush of ignorant and insolent prejudice, imagine their ungainly bodies are also hidden from the retribution that nothing can shield them from but the greater wisdom and self-sacrifice of their truer and braver compeers.

We will only note that if it is a just, normal and healthy distribution that gives to the actual creators of wealth who are beyond doubt the workers, average incomes of $473 12; to their employers, who are next in usefulness, five times as much, or $2,379 10; to the money dealers, who are of no use at all, fifty-eight times as much, or $27,460 47. If, we say, this is a healthy distribution, calculated to secure the permanent peace, happiness and progress of the nation, we should go on as we are. If it is not, the sooner the leaders of public opinion quit their twaddling, cease to re-echo the misleading platitudes that are vented as financial wisdom in the selfish and conscienceless circles of the money dealers, and make an honest effort to find a real remedy, swift, sure and conclusive, the better for themselves, the country and humanity.

COMPILATION *from the census, showing the data upon which the foregoing table of distribution is based.*

	Establishments.	Hands.	Capital.	Wages.	Material.	Product.
Agricultural implements	286	2,261	$3,387,949	$1,025,618	$1,278,805	$3,652,295
Bleaching and dying	79	733	1,212,800	352,887	6,087,364	7,285,114
Book binding	91	1,246	1,640,807	674,254	1,919,981	3,588,623
Boots and shoes	3,949	13,966	6,375,943	4,818,902	6,932,726	16,846,310
Boxes—cigar, packing, paper and wooden	104	794	447,360	358,800	597,574	1,413,743
Brass—founding, finishing, rolled and ware	68	848	2,205,985	425,140	1,157,622	2,144,055
Bread, crackers and other bakery products	809	2,364	1,920,290	783,411	3,195,678	5,597,291
Brick	458	6,637	4,559,783	2,337,691	1,530,527	6,071,209
Brushes	61	490	436,864	180,293	296,717	628,827
Carpentering and building	1,846	10,470	7,671,351	5,335,181	13,772,286	27,336,490
Carpets—rag and other	396	4,554	3,195,474	1,933,582	5,866,827	10,218,621
Carriages, wagons	1,449	6,217	4,322,517	2,229,441	2,111,361	6,682,302
Cars—freight and passenger	49	4,005	3,763,804	2,193,857	5,832,736	9,288,041
Clothing—men's, women's and children's	1,538	11,647	10,378,443	5,040,272	12,822,465	23,363,156
Coal oil, rectified	89	940	4,006,433	638,583	12,345,899	15,251,223
Confectionery	268	928	1,130,905	390,535	1,195,851	2,491,332
Cooperage	474	2,199	1,084,385	945,437	1,502,537	3,209,470
Cotton goods, all kinds grouped	143	6,841	12,575,821	3,510,534	10,749,472	17,565,028
Drugs and chemicals	82	1,633	6,060,300	826,637	5,346,834	8,451,991
Edge tools and axes	20	599	742,500	384,144	398,695	930,723
Flouring and grist mill products	2,985	6,409	20,393,620	1,278,146	41,763,255	49,476,245
Furniture—all kinds grouped	948	5,534	5,005,053	2,430,868	2,826,060	8,082,530
Gas	43	1,533	11,338,450	1,236,769	1,491,285	4,113,347
Gasometers and lamps and lamp fixtures	10	876	1,164,894	447,984	479,447	1,271,783
Glass—cut, stained, ware and window	58	4,958	6,471,416	3,544,570	2,371,128	8,422,605
Hardware and saddlery hardware	87	1,004	1,120,920	490,312	810,206	1,777,285
Hats and caps	81	1,212	1,035,663	703,088	1,248,231	2,813,766
Hosiery	76	2,516	2,979,000	1,280,270	2,925,323	5,306,738
Iron—all kinds grouped	923	47,483	81,441,752	25,846,238	85,891,142	129,388,995
Jewelry (not specified) and instrument cases	77	737	956,600	414,677	734,212	1,764,731
Leather—tanned, curried, morocco tanned and curried, and dressed skins	1,495	6,729	15,317,815	2,587,699	20,793,080	28,899,496
Liquors—distilled, malt and vinous	356	2,097	9,571,253	993,354	5,512,023	11,692,528
Looking glass and picture frames	47	598	582,500	320,458	456,548	1,140,973
Lumber—planed, sawed and staves and shooks	3,922	19,156	27,802,710	6,220,393	19,022,221	35,262,590
Machinery (not specified) cotton and woolen, railroad repairing, steam engines, &c	477	17,439	26,068,125	9,944,130	13,533,193	29,258,153

Marble and stone-work (not specified)—monuments, &c.	308	2, 645	3, 070, 910	1, 377, 739	2, 025, 034	4, 843, 302
Millinery	238	492	528, 590	199, 712	451, 413	1, 001, 925
Molasses, syrups and sugar, refined	41	1, 345	5, 635, 310	667, 057	24, 433, 614	26, 762, 176
Painting	403	1, 763	683, 945	756, 197	847, 945	2, 395, 704
Paints (not specified) lead and zinc	36	727	3, 048, 250	362, 396	2, 811, 711	4, 624, 779
Paper (not specified)—printing, wrapping and writing	78	1, 597	4, 814, 040	749, 138	3, 287, 741	5, 626, 946
Plastering	106	496	98, 385	202, 174	159, 564	513, 535
Plumbing and gas fitting	218	1, 098	860, 842	488, 799	934, 293	2, 133, 220
Printing, cotton and woolen goods	7	669	1, 695, 000	353, 380	4, 958, 960	6, 113, 584
Printing and publishing (not specified)—book, newspaper and job printing	307	4, 776	10, 668, 492	3, 195, 649	4, 996, 523	13, 482, 649
Roofing materials	58	907	1, 382, 450	399, 911	300, 385	1, 012, 657
Sash, doors and blinds	204	2, 689	3, 514, 410	1, 437, 546	2, 971, 930	5, 911, 671
Saws	11	633	930, 500	460, 479	534, 782	1, 235, 184
Ship building, repairing and ship materials	106	2, 161	1, 556, 492	1, 065, 265	1, 293, 401	3, 083, 244
Silk goods, (not specified,) sewing and twist	10	489	1, 429, 000	326, 400	919, 024	1, 632, 900
Soap and candles	96	667	1, 821, 200	301, 344	1, 762, 376	3, 149, 481
Steel—Bessemer, cast, forged and springs	28	1, 979	5, 291, 400	1, 323, 134	4, 522, 954	7, 956, 001
Stereotyping and electrotyping	11	497	938, 000	320, 934	149, 150	792, 700
Stone and earthenware	198	1, 262	1, 477, 240	448, 315	534, 808	1, 659, 747
Tin, copper and sheet iron ware	974	3, 420	3, 202, 477	1, 206, 277	2, 423, 749	5, 311, 810
Tobacco, cigars	975	4, 564	1, 966, 395	1, 460, 359	1, 982, 445	5, 276, 628
Umbrellas and canes	27	653	1, 016, 682	343, 260	1, 051, 926	2, 049, 793
Upholstery	95	516	686, 888	212, 165	613, 889	1, 311, 743
Wood—turned, carved and work, miscellaneous	164	951	644, 548	381, 468	366, 689	1, 251, 030
Woolen goods	403	7, 992	14, 066, 785	4, 340, 066	17, 325, 849	27, 361, 897
Worsted goods	31	2, 168	3, 350, 078	1, 363, 334	4, 932, 940	7, 883, 038

ACTUAL EARNINGS OF WORKMEN VERSUS QUOTED WAGES.

In the foregoing paper and tables, we have given the distribution of the rewards of industry as they are determined by the best data within our reach. In this, we propose to give the rates of wages collected by the Massachusetts Bureau, in many foreign countries, and in that State. This collection is the result of great expense and effort, and was intended, as explained by that Bureau, to show how the compensation received by labor in other countries compares with Massachusetts. We might have added to the curious interest attending this labored collection by putting in it the quoted wages in Pennsylvania. This we have not done, however, because we still adhere to the opinion expressed last year, that it is little difference to the result we are called upon to reach, what the wages in foreign countries are, and how they compare with ours, whether higher or lower. The only use made of such comparisons having been to make texts to be quoted in our journals, upon which discourses are founded, glorifying the superior treatment and condition of our working classes over those of other countries, a sort of "whistling to keep our courage up," while our streets swarm with mendicants, forced to become such by a system that has thrown at least one-third of all our working population idle and kept them so for a year and a half. We still believe the plan we adopted last year is the best, and every thing we have since learned has confirmed us in the conclusions we then reached. We, therefore, along with this collection of curiosities from the Massachusetts report, reproduce the pages showing our data, classifications and conclusions of last year.

Only adding, by way of further introduction, that extensive travel through the State, and personal observation and inquiry compels us to say, that to reach the actual earnings of this year, a deduction of at least 33 per cent. must be made from our last year's figures.

Extracts from last year's report, page 345, Schuylkill county.

A table showing the amount actually earned and received by the several classes of mine workers during this year of high wages, which our classification and the census will enable us to give, very closely approximating the truth, will be very instructive and suggestive. The following table will show the

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR THE CENSUS YEAR.

Rate per day....	CLASS.	Numbers.......	Total amt. paid each class for year........	Amount paid each class per day.........	Average earn'gs per man for year.........
$3 74.78	Miners by contract	5,056	$2,890,401 26	$18,948 87	$571 68
2 49.85	Miners by wages	1,124	428,521 21	2,809 31	381 25
2 14.16	Inside laborers	2,249	734,687 89	4,816 45	326 67
1 96.3	Outside laborers............	2,550	763,547 57	5,005 65	299 43
1 07.08	Boys inside.................	886	144,714 80	948 72	163 34
80.31	Boys outside................	3,094	379,021 27	2,484 79	122 50
Number of miners, laborers and boys..		14,959	5,340,894 00	35,013 79	
Number and pay of full time hands...		819	698,880 00		
Totals of census tables.............		15,778	6,039,774 00		

OUR ESTIMATE OF NINE MONTHS AS A FULL YEAR'S WORK CORROBORATED.

This table fully corroborates our estimate of 9 months of 24 days each as a full average year's work; by dividing the total amount paid by the total earnings of one day under this classification and these wages, it will be seen that the average time made in this year was a little over 152½ days. This gives less than 6½ months of 24 days each for the year. When it is remembered that at least 6 months of this time, from the middle of June to the middle of December, 1869, under the impulse of high wages, everything was pushed to its utmost capacity, and from that until the first of April, 1870, three months, work was not entirely suspended at any time, and the most of the time pretty full, this showing will be very suggestive of the interruptions attendant upon the trade, and go far to vindicate the average adopted here. If, in the ten months from June 1, 1869, to April 1, 1870, six months of which work was pushed to the fullest capacity, and the remainder subject to very little more than the usual interruptions, only six months and less than a half could be made, it is hard to understand how the general average for twelve months could be more than nine.

In the year 1870 there were but five months worked as per this table.

APPROXIMATED AVERAGE EARNINGS IN 1870.

The following statement shows an approximation to the amount of the average earnings of each class of workmen during these five months. The same rule that reduces the time made in the year to nine months, when no unusual obstacles intervene, holds good here, and this five months cannot be counted as more than an average of four. More especially is this the case since work slacked off very greatly through the latter half of December. The wages averaged for the five months eighteen and one-tenth per cent. below the basis. The account, therefore, stands thus, viz:

Miners by contract, ninety-six days, at	$2 86.65	per day	$275 18
Miners by wages ... do ... do	1 91.1	do	183 45
Inside laborers ... do ... do	1 65.5	do	158 88
Outside laborers ... do ... do	1 50.15	do	144 14

ACTUAL AVERAGE EARNINGS, 1872.

As the deduction of 8¼ per cent. each for the months of April and May, shows an average deduction for the year, of 1.375 per cent., the following will be the actual average earnings, supposing the average time made to have been our estimate of nine months, of twenty-four days each, for the year:

Miners on contract	216 days, at	$2 93.33	$634 67
Miners on wages	do	2 13.60	461 37
Inside laborers	do	1 80.80	390 52
Outside laborers	do	1 64.40	355 10
Boys inside	do	88.80	191 80
Boys outside	do	66.60	143 85

For the rest of our extracts we will give the whole of the pages as they are, explanations and all, that the reasons for the conclusions we reached, may be seen.

LUZERNE COUNTY.

What has been said of the causes and rise of the Workingmen's Benevolent Association in Schuylkill county will apply also to Luzerne and Carbon, except that the movement in the two latter began and culminated earlier. While Schuylkill and Northumberland, together with Columbia, seem to have become ripe for the movement just at the time when what may be said to have been experimental movements in the upper counties had prepared the way for a more thorough, practical and benevolent organization than had hitherto been known. The great mining companies also, by concert of action that enabled them to control, to a great degree, the issue of contests between employers and employed, did much to prevent the isolated conflicts and strikes that in Schuylkill and the other lower counties were so prolific of dissension, bitterness and disaster. The consequence was, as the figures we are about to present will show, that at the time the great movements we have been treating of in Schuylkill commenced, the condition of labor in the northern field was much better. The census tables give for Luzerne county, as follows, viz:

Total number of collieries returned 90

Total hands employed		28,016
Total men above ground	7,772	
Total men under ground	16,589	
Total boys above ground	1,670	
Total boys under ground	1,985	

The classification of workmen in Schuylkill county was based upon information derived from personal inquiry and very intimate knowledge of the trade there. In this and the other anthracite counties, modifications are needed to meet the different conditions existing, and to show these differences (in part) the following comparative table is given, collated from the census tables:

COMPARATIVE TABLE OF CENSUS RETURNS FOR ANTHRACITE COUNTIES.

COUNTIES.	No. of collieries.	Product in tons.	Total amount of wages paid....	TOTAL HANDS EMPLOYED.				Product in tons per colliery....	No. of hands per colliery......	Product in tons per hand......	Wages paid per hand........
				Men above ground...	Men under ground...	Boys above ground...	Boys under ground...				
Carbon	4	403,384	$592,334	565	425	44	180	100,846	303.5	332.2	$487 91
Columbia	8	400,876	771,958	735	1,215	....	353	50,109	287.8	174	335 19
Dauphin	5	411,355	571,924	416	1,164	62	90	82,271	346.4	237.5	330 21
Luzerne	90	9,519,298	13,269,206	7,772	16,589	1,670	1,985	105,769	311.3	339.7	473 62
Northumberland	27	1,001,200	1,652,953	1,142	2,010	627	60	37,081	142.1	260.8	430 57
Schuylkill	91	3,860,144	6,039,774	3,187	8,611	3,094	886	42.419	173.3	244.6	382 79
	225	15,596,257	22,898,149	13,817	30,014	5.497	3,554				
				30,014							
				5,497							
				3,554							
Total hands employed				52,882							

In collieries so large as the average in Luzerne and Carbon, the number of persons who are called full time hands must be largely in excess of those in the smaller collieries of Schuylkill, Northumberland and Columbia. The statement of Mr. Sharpe, in the Appendix, gives the number at his colliery at 29. The outside and inside superintendents mentioned are taken to be breaker bosses and mining bosses, as they are not otherwise specified. He only gives the wages of the engineers, machine superintendent, stablemen, &c. These we put at his figures, and the rest we estimate at wages proportionate with the general estimate for collieries of the Luzerne county class. His statement would show 29 full time hands to every 322 employed. But as his colliery is a little larger than the average of all in the county—that being 311.3 hands to the colliery—we reduce the number of engineers by one to each colliery, making the total 28 instead of 29. The full time hands to be deducted in this county from the whole number of hands, with their pay, will therefore be as follows, viz:

90	Mining bosses, 1 to each colliery, at	$1,500 00	$135,000 00
90	Breaker..do..............do......	1,200 00	108,000 00
90	Machine superintendents...do......	1,200 00	108,000 00

90	Carpenters, 1 to each colliery, at....	$1,000 00 ...	90,000 00
180	Ticket bosses, 2...........do......	675,00 ...	121,500 00
540	Stablemen, &c., 6.........do......	675 00 ...	364,500 00
1,440	Engineers, 16.............do......	825 00 ...	1,188,000 00
2,520			2,115,000 00

By deducting this amount from the total wages paid, it will be seen that the miners, laborers and boys receive.................. $11,154,206 00

And by deducting from the whole number given in the census, 28,016, the above 2,520 full time hands, we have 25,496 miners, laborers and boys to whom it is paid. Now, we assume that the proportions of the classes, and the wages represented as having been paid at Mr. Sharpe's colliery, as per his statement, presents a reasonably close approximation to the general average, in these respects, of collieries in his county, as also in Carbon. We are, therefore, governed by his figures in making the following table, except as to the wages of boys, which we are sure are too high inside, and too low outside to be accepted as a fair presentation of the average in the county. We make this first table up, with the contract miners daily earnings put at $5 00, because that is the amount testified to, both by Mr. Sharpe and Mr. Waddell:

Rate per day........	CLASS.	Number........	Earnings of each class per day..........	Earnings of each class for year of 180 days, or 7½ months........	Average yearly earnings per man ......
$5 00	Miners on contract	7,810	$39,050 00	$7,029,000 00	$900 00
2 77	Miners on wages..................	1,403	3,886 31	699,535 80	498 60
2 22	Miners laborers, (average).......	4,801	10,658 22	1,918,479 60	399 60
2 17	Laborers inside for company.....	2,305	5,001 85	900,333 00	391 90
2 47	Mechanics and helpers outside...	1,052	2,598 44	467,719 20	444 60
1 70	Outside laborers, (ordinary)	4,470	7,599 00	1,367,820 00	306 00
1 25	Boys inside	1,985	2,481 25	446,625 00	225 00
75	Boys outside	1,670	1,252 50	225,450 00	135 00
		25,496	72,527 57	13,054,962 60	....

The table demonstrates the wages as given in Mr. Sharpe's and Mr. Waddell's evidence, as entirely too high for an average. It will be seen that the amount earned for the year is, at these rates, $1,900,576 60, about 27 per cent. too high, or rather, that much more than was actually paid. The year's work is put at 180 days, because we estimate 9 months of 24 days each as a full year's work; and inasmuch as all the collieries in this region lost two months by suspension in this year, except those of the two great companies alluded to in the paper on Schuylkill county, we reduce the time proportionately. As nine months is three-fourths of twelve months, seven and a half months, or 180 days, is three-fourths of ten months. Now, as the wages of the time-workers purport to be sworn abstracts from Mr. Sharpe's books, we cannot reduce them ; but the daily earnings of contract miners being only estimated by these witnesses, and their estimates being held by the miners themselves as being very greatly too high, it is manifest that the reduction must be made there alone. We, therefore, reduce the contract earnings by 27 per cent., and the following table furnishes its own evidence of approximate correctness. In this table we also include among the miners by wages, the mechanics and helpers, as from their pay they should rate as skilled workmen. Also, we throw together the miners' laborers, and company laborers, inasmuch as the difference in the rate of their wages is very trifling :

Rate per day....	CLASS.	Number......	Earnings of each class per day...	Earnings of each class for census year........	Actual avg. earnings for year...
$3 65	Miners on contract..................	7,810	$28,506 50	$5,130,309 80	$656 89
2 65	Miners on wages.....................	2,455	6,505 75	1,170,838 71	476 92
2 20	Laborers inside, (average,)........	7,106	15,633 20	2,813,504 25	395 93
1 70	Laborers outside, (average,).......	4,470	7,599 00	1,367,590 86	305 94
1 25	Boys inside..........................	1,985	2,481 25	446,550 16	224 96
75	Boys outside........................	1,670	1,252 50	225,412 22	134 98
	Number and pay of miners and laborers ..	25,496	61,978 20	11,154,206 00	
	Number and pay of full time hands.......	2,520		2,115,000 00	
	Totals of census tables.................	28,016		13,269,206 00	

This we think is very close to the truth, both from the manner in which it corroborates the testimony of the workmen themselves, (see Mr. William's letter,) and the demonstration it furnishes of itself, that the wages could not have been higher than are here stated. If there is difficulty in reconciling the difference between the estimates so confidently given by the operators and these results, and if our figures fail to corroborate *them*, it must be borne in mind that the duty imposed here is as nearly as possible to present the *truth* as it is, and not as we would like it to be. It cannot be possible that more money was earned, and at higher wages than are given here for the census year, for the estimate of wages must be kept down so as to bring the earnings for the time that must have been worked within the amount that was actually paid. That the result thus necessarily reached *is a corroboration* of the workmen's assertions, is a fact for which we are not responsible ; our duty going no further than to be sure that *i is a natural and truthful result, arrived at by honest inquiry and analysis*.

CARBON COUNTY.

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year ..	Actual avg. earnings for year...
$3 65	Miners by contract..................	184	$671 60	$148,912 40	$809 25
2 65	Miners by wages....................	57	151 05	33,491 92	587 57
2 20	Inside laborers......................	168	369 60	81,950 71	487 80
1 70	Outside laborers....................	469	797 30	176,773 71	376 91
1 25	Boys inside..........................	180	225 00	49,887 00	277 16
75	Boys outside.........................	44	33 00	7,318 26	166 30
	No. and pay of miners, laborers and boys,	1,102	2,247 55	498,334 00	
	No. and pay of full time hands............	112		94,000 00	
	Totals of the census returns...........	1,214		592,334 00	

COLUMBIA COUNTY.

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR.

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year ..	Actual avg. earnings for year...
$3 00	Miners by contract..................	536	$1,608 00	$242,176 91	$451 82
2 40	Miners by wages....................	167	400 80	60,363 58	361 45
2 14	Inside laborers......................	489	1,046 46	157,622 48	322 33
1 90	Outside laborers	662	1,257 80	189,433 79	286 15
86	Boys	353	303 58	45,721 24	129 52
	No. and pay of miners, laborers and boys,	2,207	4,616 64	695,318 00	
	Number and pay of full time hands......	96		76,640 00	
	Totals of census returns...............	2,303		771,958 00	

In this calculation, we are compelled largely to reduce the rates of wages below either the upper counties or Schuylkill. At this rate the time worked is only a little over 150 days, or six months and six days. All the information we have puts the conditions here the same as Schuylkill. By shortening the time worked we can increase the wages, but there is no reason known here why any other arrangement of the figures would not be further from the truth than this.

DAUPHIN COUNTY.

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year ..	Actual avg. earnings for year...
$2 30	Miners by contract.................	415	$954 50	$204,153 94	$491 93
2 00	Miners by wages....................	129	258 00	55,181 04	427 76
1 83	Inside laborers.....................	379	693 57	148,343 49	391 40
1 75	Outside laborers....................	309	540 75	115,658 35	374 29
75	Boys inside.........................	90	67 50	14,436 90	160 41
50	Boys outside	62	31 00	6,630 28	106 94
	No. and pay of miners, laborers and boys..	1,384	2,545 32	544,404 00	
	Number and pay of full time hands.......	32		27,520 00	
	Number deducted from census tables.....	316			
	Totals of census tables................	1,732		571,924 00	

NORTHUMBERLAND COUNTY.

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR.

Rate per day....	CLASS.	Number........	Earnings of each class per day ..	Earnings of each class per year ..	Actual avg. earnings per year ..
$4 20	Miners by contract..................	880	$3,696 00	$590,973 26	$671 56
2 80	Miners by wages....................	274	767 20	122,671 63	447 70
2 40	Inside laborers.....................	802	1,924 80	307,766 35	383 74
2 20	Outside laborers....................	975	2,145 00	342,975 47	351 76
1 20	Boys inside.........................	60	72 00	11,512 34	191 87
90	Boys outside	627	564 30	90,228 95	143 90
	No. and pay of laborers, miners and boys..	3,618	9,169 30	1,466,128 00	
	No. and pay of full time hands............	221		186,825 00	
	Total of census returns................	3,839		1,652,953 00	

RECAPITULATION OF LABOR IN ANTHRACITE MINES.

We have prepared the following table, as a condensed recapitulation of the results reached in the foregoing pages. To those who feel the interest in the subject, and have the patience to study it, it cannot but be very instructive and suggestive. Even should the reader discover the errors in it, (which we cannot hope may not be found,) it is confidently believed that it holds within itself the evidence of its near approximation to correctness. It will be used to enable us to classify and present the condition of labor in all the leading industries of the State, in all of which our information is meagre on those points, and in many, none at all, except general report. The difficulty of the work committed to us in this particular, can only be comprehended by a careful study of the figures presented here.

RECAPITULATION TABLE OF THE ANALYSIS OF RETURNS FOR THE ANTHRACITE COUNTIES.

COUNTIES.	CLASSES.	Numbers......	Average daily wages........	Average days worked......	Total wages paid.	Actual average earnings for the year......
Carbon........................	Full time hands ...	112	$2 85	300	$94,000 00	$866 07
Columbia........................	.....do ......do......	96	2 66	300	76,640 00	798 33
Dauphin........................	.....do ......do......	32	2 87	300	27,520 00	860 00
Luzerne	.....do ......do......	2,520	2 80	300	2,115,000 00	839 28
Northumberland................	.....do ......do......	221	2 81	300	186,825 00	845 36
Schuylkill	.....do ......do......	819	2 84	300	698,880 00	853 33
Totals and general averages..	....	3,800	2 80.6	300	3,198,865 00	841 80
Carbon	Skilled workmen ..	241	$3 41	221.7	$182,404 32	$756 86
Columbia........................	.....do ......do......	703	2 85	150.6	302,540 49	430 35
Dauphin........................	.....do ......do......	544	2 23	213.8	259,334 98	476 72
Luzerne	.....do ......do......	10,265	3 41	180.0	6,301,148 51	613 84
Northumberland................	.....do ......do......	1,154	3 86	160.0	713,644 89	618 41
Schuylkill	.....do ......do......	6,180	3 52	152.5	3,318,922 47	537 04
Totals and general averages..	....	19,087	3 41.8	169.8	11,077,995 66	580 37
Carbon	First class labor ...	168	$2 20	221.7	$81,950 71	$487 80
Columbia........................	.....do ......do......	489	2 14	150.6	157,622 48	322 33
Dauphin........................	.....do ......do......	379	1 83	213.8	148,343 49	391 40
Luzerne	.....do ......do......	7,106	2 20	180.0	2,813,504 25	395 93
Northumberland................	.....do ......do......	802	2 40	160.0	307,766 35	383 74
Schuylkill	.....do ......do......	2,249	2 14	152.5	734,687 89	326 67
Totals and general averages..	....	11,193	2 18.7	173.3	4,243,875 17	379 15
Carbon	Second class labor..	469	$1 70	221.7	$176,773 71	$376 91
Columbia........................	.....do ......do......	662	1 90	150.6	189,433 79	286 15
Dauphin........................	.....do ......do......	309	1 75	213.8	115,658 35	374 29
Luzerne	.....do ......do......	4,470	1 70	180.0	1,367,590 86	305 94
Northumberland................	.....do ......do......	975	2 20	160.0	342,975 47	351 76
Schuylkill	.....do ......do......	2,550	1 96	152.5	763,547 57	299 43
Totals and general averages..	....	9,435	1 83.7	170.4	2,955,979 75	313 29
Carbon........................	Youth	224	$1 15	221.7	$57,205 26	$255 38
Columbia........................	....do................	353	86	150.6	45,721 24	129 52
Dauphin........................	....do................	152	65	213.8	21,067 18	138 53
Luzerne	....do................	3,655	1 02	180.0	671,962 38	183 60
Northumberland................	....do................	687	92	160.0	101,741 29	148 09
Schuylkill	....do................	3,980	86	152.5	523,736 07	131 00
Totals and general averages .	....	9,051	93.2	168.3	1,421,433 42	157 04
Number and pay of employees..................		52,566	$2 39.9	181.5	$22,898,149 00	$435 60
Deducted from census for Dauphin county...........		316			*84,664 00	
Total number given in census report..............		52,882			22,982,813 00	

*Amount credited to Allegheny and Montour counties in census, evidently error.

LABOR IN THE BITUMINOUS COAL MINES.

The following shows the census returns for each of the counties producing bituminous coal, given as a comparative table:

COUNTIES.	No. of collieries	Product in tons	Total amount wages paid	Total hands employed	Men under ground	Men above ground	Boys under ground	Boys above ground	Product in tons per colliery	No. of hands per colliery	Product in tons per hand	Wages paid per hand	Wages paid per ton
Allegheny	66	2,635,431	$3,504,168	6,086	4,900	1,082	104	....	39,931	92.2	433	$575 77	$1 33
Armstrong	11	186,465	165,300	312	248	16	48	....	16,951	28.4	598	529 80	88.6
Beaver	16	28,020	27,750	83	70	12	1	....	1,751	5.2	338.8	334 34	98.7
Bedford	6	115,200	94,010	252	231	21	......	....	19,200	42	457.2	373 05	79
Blair	6	161,850	81,500	191	162	29	......	....	26,975	31.9	847.3	426 70	50.4
Bradford	2	350,000	560,000	750	700	50	......	....	175,000	375	466.6	746 66	1 60
Butler	46	63,118	57,307	149	143	6	......	....	1,372	3.3	423.6	384 61	90.8
Cambria	3	244,298	287,887	527	471	56	......	....	81,432	175.6	463.5	546 27	1 17.8
Centre	7	184,456	145,978	302	253	39	10	....	26,351	43	610.7	483 37	79.1
Clarion	9	55,540	41,570	103	97	6	......	....	6,171	11.4	539	403 59	74.8
Clearfield	11	181,237	147,903	279	251	21	7	....	16,476	25.4	649.6	530 11	81.9
Elk	2	78,779	78,920	142	100	13	20	9	39,389	71	554.9	555 77	1 00.1
Fayette	22	453,580	267,321	477	305	172	......	....	41,334	21.7	950.9	560 42	58.9
Huntingdon	7	163,693	175,014	334	195	139	......	...	23,385	47.8	490	523 90	1 06.9
Indiana	23	38,082	25,510	108	60	45	3	....	1,655	4.7	352.6	236 20	67
Jefferson	3	3,092	1,540	8	8	....	......	....	1,031	2.8	386.5	192 50	49.8
Lawrence	11	129,810	190,335	245	197	48	......	....	11,801	22.3	529.8	776 88	1 46.6
Lycoming	1	2,000	2,200	30	20	10	......	....	2,000	30	66.6	73 33	1 10.1
M'Kean	1	21,953	36,000	60	40	20	......	....	21,953	60	365.9	600 00	1 63.9
Mercer	34	659,875	1,130,827	1,994	1,732	258	4	....	19,408	58.6	330.9	567 11	1 71.3
Somerset	11	6,510	3,665	25	22	3	......	....	591	2.3	260.4	146 60	56.3
Tioga	3	733,562	650,000	1,683	1,375	308	......	....	244,521	561	435.9	386 20	88.6
Venango	11	36,230	51,020	108	97	11	......	....	3,293	9.8	335.4	472 40	1 40.8
Warren	1	200	200	2	2	....	......	....	200	2	100	100 00	1 00
Washington	27	510,077	489,880	1,042	790	129	123	....	18,892	38.6	489.5	470 13	96
Westmoreland	19	755,460	779,690	1,559	1,367	187	5	....	39,760	82	484.6	500 12	1 03.2
	....	7,798,518	8,995,495	16,851	13,836	2,681	325	9	....	....	....	....	....

It will be seen by an examination of this table that in some of the counties, the amount produced and wages paid are so exceedingly small that they serve as a demonstration that they are not the exclusive business of those engaged in coal mining in them ; these counties are, more prominently than others, Indiana, Jefferson, Somerset and Warren. Lycoming would belong to the same class, if there is no error in the return, but as there is well known to be a very large colliery at Ralston, there is evidently clerical error in making up the tables. We throw out Lycoming then, along with those named above, in making our classification and averages, to show actual earnings for the year in this industry. The following five returns have been received from operators in the western bituminious field, upon which, and the sworn evidence of the miners at Pittsburg, together with the statement of the workmen taken in Fall Brook, Tioga county, we will mainly base our estimates of the actual average earnings.

Joseph Turnbull, miners	28	at $4 50	per day,	9	months.
Do......do...drivers	2	3 25	do	9	do.
Do......do...laborers outside	2	2 75	do	11	do.
Do......do...one hand at $60 00 per month, 12 months in year.					
James Rutherford, bosses	2	at $3 00	per day		
Do......do....miners	34	at 4 00	do.		
Do......do....boys	5				
Do......do....pit driver	1,	at ——	do.		
Do......do....tipple men, &c	3,	at 2 75	do.		
Lewis, Bailey, Dalzell, & Co., bosses	1,	at 4 50	do.		
Do......do......do.....miners	69,	at 2 44	do.		
Do......do......do.....drivers & laborers inside,	10,	at 2 37	do.		
Do......do......do.....brakemen	4,	at 1 87	do.		
Do......do......do......teamsters and outside laborers	6,	at 2 00	do.		
Do......do......do......trappers, boys	2,	at 50	do.		
Negley & Co., bosses and superintendents	2,	at 3 25	do.		
Do.........miners	92,	at 3 56	do.		
Do.........pit drivers, &c	20,	at 2 50	do.		
Do,.........brakemen	3,	at 2 33	do.		
Do.........teamsters and laborers	11,	at 2 00	do.		
Do.........trappers, boys	3,	at 75	do.		
Hartley & Marshall, bosses	2,	at 3 00	do.		
Do........do....miners	120,	at 3 50	do.		
Do........do...pit drivers, &c	10,	at 2 50	do.		
Do........do... teamsters and outside laborers,	3,	at 2 25	do.		
Do........do ...trappers, boys	4,	at 60	do.		
Do........do....engineers	2,	at 2 00	do.		

The return of Mr. Joseph Turnbull, of Fayette City, in the matter of wages, was so much in excess of any other, that it was supposed to be an inadvertent error, and he was addressed a second time calling attention to it. The following is his reply:

FAYETTE CITY, NOVEMBER 8, 1873.

SIR: —My last report was as near the truth as I can make it. The facts are as follows: For each month of 1873, January and February, $2 50 per day; March and April, $2 75 per day; May, June and July, $3 00 per day; August, September and October, $3 25 per day,

Yours, &c.,

JOSEPH TURNBULL.

Mr. Turnbull gives as the time made in a year by miners and drivers, 9 months, (which we put at 24 days each) outside laborers, 11 months; one hand at $60 per month, full time.

Lewis, Bailey, Dalzell & Co.—all the year, holidays and unforseen accidents excepted. This cannot, in all likelihood, be more than 11 months of 24 days days each.

James Rutherford—9 months average in the year.

Hartley & Marshall—bosses constantly employed; average for remainder, 250 days—about ten months and half.

George Archbold in his evidence at Pittisburg, in answer to questions put by the deputy commissioner, puts the proportion of wage-workers to the whole, exclusive of boys, at about ten per cent.—about four boys to the hundred hands average.

Average wages of contract miners, from $2 to $2 50 per day, or $25 to $30 per pay of two weeks, at 4 cents per bushel rates.

Average drivers' wages, $2; pit drivers, $2; boys, from 50 cents to 75 cents per day.

Eli Enscoe, (also of Pittsburg evidence,) puts the average wages in the bank were he works, $2 50 per day for 8 or 9 months, 12 hours per day.

William Chalmers (same.) "The mines where I work employ 120 hands. Of these, are 6 drivers, 3 trimmers, 1 is weigh-boss, 1 tippleman, 1 roadsman, 1 pit boss, 1 check weigh master, 2 blacksmiths, 1 carpenter and one boy greasing wagons—in all, 18; average earnings of contract miners, not exceeding $2 50 per day. Average will be nearer $2 25; for day-workers, from $3 down to $2; in some cases as low as $2 00, and even $1 75 per day."

The workmen at Fall Brook, Tioga county, gave the deputy commissioner the following figures:

To every 100 men there would be about the following proportions of each class, with the wages given opposite:

Drivers	14	from $1 25 to $1 80	per day.
Dumpers	6	1 62½	"
Slate pickers	3	from 1 37½ to 1 50	"
Of other hands at colliery,			
Repairing roads	2 men	at 2 00	"
Carpenter	1 man	at 2 00	"
Blacksmith	1 man	at 2 00	"

This is about the average for the last five years, except they are about five per cent. lower than in 1870.

We are paid 55 cents a ton for mining coal, and the operators claim five tons for a day's work on the average, but men more frequently make less than more.

The result of these statements would be about as follows:

For the western part of the State we take the statements of the operators, somewhat modified by those of the workmen in the evidence given at Pittsburg. This is rendered the more appropriate, from the fact that in the answer to the inquiry made of Mr. Turnbull, it is indicated that these returns show the highest earnings made by any, and *not* in any just sense an average; for instance, in his return, pit drivers, whom we put in our classification among first class unskilled labor, are given as receiving $3 25 per day, while in his answer to our second application he shows the average to have been, at his own figures, $2 86 per day. Now if this is to be taken as the conception of the operators, of what constitutes *average wages,* it is certainly no violent assumption to conclude that the very flattering rates given are the rates paid to the highest earners, at the exceptionally highest times in the year. If, therefore, we examine their statements in the light of the sworn statements of the workmen, estimating each at its apparent value, and striking an equitable *mean* between the two, we will probably not be far wrong.

It will be seen, also, that the cost in wages per ton of coal varies considerably between the counties favorably and unfavorably situated for shipping, and it is believed that while some of this difference is attributable to the more favorable conditions of the seams in some places than in others, yet that *more of it grows out of lower prevailing rates of wages in the regions less favorably located for market.* We, therefore, modify the rates in the Pittsburg region as given in the operators' return, by the sworn statements of the workmen there, and take that average for the rates in all counties in which the cost per ton in wages is $1 or more; while in those in which it is less than $1 we reduce the rates so found by one-half of the percentage of average difference. Thus, there are ten counties in which the cost per ton in wages equals or exceeds $1 per ton, and these will show a general average of cost in wages of $13 38 per ton, while there are eleven counties in which the cost is less than $1 per ton in wages, and these show a general average of 90.3 cents per ton. The remaining five counties are left out for reasons already given Now, without confusing our statement by multiplying figures here, showing the calculations, we present at once a table showing the classification, average daily earnings, and earnings for the year of each class, with actual average earnings of each person for the year, leaving those who care to do so to test their correctness upon the basis explained above:

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR.

Rate per day...	CLASS.	Number.......	Earnings of each class per day...	Earnings of each class for year..	Actual ave. earnings for year...
$3 00	Bosses, &c., full time hands........	826	$2,478 00	$743,400 00	$900 00
2 50	Skilled workmen	12,883	32,207 50	7,043,329 03	546 71
2 00	Laborers, first class	1,652	3,304 00	722,538 73	437 37
1 75	Laborers, second class.............	1,156	2,023 00	442,402 10	382 70
60	Boys..............................	334	200 40	43,825 14	132 21
	Totals of census returns...............	16,851	40,212 90	8,995,495 00	....

There can be but little doubt that this table approximates very closely the real average wages for the whole twenty-six bituminous coal counties in the census year. In some localities they rule higher—in some lower. In very few, however, of localities or trades, are quoted wages ever realized as averages, the tendency being on the part alike of employer and employed to over-state rather than under-state them. This fact furnishes the reason why, when we attempt to reconcile the quoted wages with the reasonably estimated time worked, and the amount actually paid, it is found necessary to reduce the quoted rates to bring the earnings for the time within the limit of the amount. In the estimate for the bituminous fields, the full time hands are given as having been employed 300 days in the year; while at the rates adopted for the others there is only 218 days and a small fraction over. The results reached in these industries indicate the following general averages of earnings for the year; being a general average of the classification and earnings of all the coal counties:

CLASSIFICATION AND AVERAGE EARNINGS IN ALL COAL MINING.

CLASS.	Number	Percentage of the whole	Avg. days worked	General average earnings
Full time hands	4,626	6.7	300.	$852 19
Skilled workmen	31,970	46.0	185.9	566 82
First class laborers	12,845	18.5	178.7	386 64
Second class laborers	10,591	15.3	175.5	320 87
Boys	9,385	13.5	169.6	156 12
	69,417	....	....	....

MINING OTHER THAN COAL.

In the mining of the following productions, it has not been in the power of the Bureau to obtain definite information, in the way of returns, and we must base our estimates on a few personal inquiries and common report; the census gives the following figures:

RETURNS FOR MINING OTHER THAN COAL, FROM CENSUS.

PRODUCT.	Number of establishments......	Total hands employed........	Menabove ground,	Men under ground	Boysabove ground	Total wages paid..	Product in dollars,
Cooper.........	2	7	7	....	....	$2,640	$7,800
Iron ore.... ...	186	4,886	2,551	2,139	196	2,051,345	3,944,146
Marble.........	6	86	86	....	....	39,320	101,000
Nickel..........	1	48	26	....	22	6,400	24,000
Petroleum......	2,148	4,070	4,070	....	....	3,797,818	18,045,967
Slate...........	28	732	731	....	1	325,447	618,229
Stone..........	126	1,114	1,112	....	2	446,277	873,879
Zinc............	1	400	180	180	40	167,721	235,555
	2,498	11,343	8,763	2,319	261	6,836,968	23,850,576

In this statement it will be seen that the earnings in the production of petroleum exceed more than twice those in the other products noted.

Upon application to the Hon. A. L. Campbell, of the House of Representatives, whose large experience in this pursuit enables him to speak with authority on the subject, we were informed that the wages paid in the oil operations are largely in excess of any other occupation in the region, and that the returns undoubtedly present a correct statement of the facts. He estimates the number of foremen at wages at about one to every two wells throughout the region, with wages from $3 50 to $5 per day; skilled workmen, drillers, tool dressers, engineers, &c., wages from $3 to $4 50 per day, and laborers from $2 25 to $3 50 per day; the two latter classes about equally divided in numbers. We, therefore, give the following as our classification, wages and earnings, based upon his information:

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR.

Rate per day....	CLASS.	Number........	Daily earnings of each class.....	Earnings of each class for year..	Actual avg. earnings for year...
$4 25	Foremen....	1,074	$4,564 50	$1,279,109 67	$1,190 97
3 50	Skilled workmen..............	1,498	5,243 00	1,469,246 53	980 80
2 50	Laborers, first class...........	1,498	3,745 00	1,049,461 80	700 57
	Total of census tables............	4,070	13,552 50	3,797,818 00	....

The seven remaining mining industries are so nearly alike in the amount of annual earnings, (with the exception of nickel, which is so small in volume as not to affect materially the general average,) that in the absence of definite information, we are not inclined to multiply figures to no good purpose, and therefore present them all in one table, under the same general proportions as have been adopted in coal mines:

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year..	Actual avg. earnings for year...
$2 75	Foremen......................	510	$1,402 50	$397,249 33	$602 25
2 25	Skilled workmen..............	2,900	6,525 50	1,429,557 78	492 97
1 75	Laborers, first class...........	1,797	3,144 75	688,937 87	383 38
1 45	Laborers, second class...	1,805	2,617 25	573,375 45	317 65
70	Boys............................	261	182 70	40,029 57	153 37
	Total of census tables	7,273	13,872 70	3,039,150 00	....

As this is the conclusion of the consideration of mining industries, we give on next page a final recapitulation of the results reached, as follows:

RECAPITULATION TABLE OF ALL MINING INDUSTRIES.

CLASS.	Number........	Percentage of the whole........	Avg. days worked............	Avg. daily wages	General average earn'gs for yr..
Foremen, &c.	6,210	.8	289.33	$3 08	$891 06
Skilled workmen	36,368	.45	192.49	3 00	577 98
Laborers, first class	16,140	.20	194.12	2 14	415 41
Laborers, second class	12,396	.15	180.7	1 77	320 40
Boys	9,646	.12	173	90.4	156 05
	80,760 *316 †13 ‡126				
Total of census table	81,215				

*Number deducted from census return for Dauphin county.

†Number credited erroneously to anthracite collieries in Allegheny by the census return.

‡Number credited erroneously in census return to anthracite collieries in Montour.

MANUFACTURING INDUSTRIES.

We now give tables showing all the returns received at the Bureau, together with the statements received (not written) on personal application. These returns are, as has been before remarked, very few in number, and valuable more as showing the necessity of such legislation as would enable the Bureau to secure them largely, than for the aid they furnish to the work they were intended to promote.

AGRICULTURAL IMPLEMENTS.

In this industry we have only received two returns, one from Chester county and one from Dauphin county.

The Dauphin county return is as follows, viz ;

Foremen	3, at	$3 00	per day
Machinists	6, at	2 25	do.
Carpenters	8, at	2 25	do.
Moulders	2, at	2 00	do.
Blacksmiths	1, at	2 25	do.
Painters	1, at	2 00	do.
Brass moulders	1, at	2 80	do.
Laborers	3, at	1 50	do.
Engineers	1, at	2 25	do.
Apprentices and youth, 13, average of		75	do.

The return from Chester county is as follows, viz :

Foundrymen	2, at	$2 50	per day.
Blacksmiths	3, at	2 50	"
Machinists	5, at	2 25	"
Wood-workers	6, at	2 25	"
Painters	1, at	2 00	"
Laborers	2, at	1 50	"
Engineers	1, at	1 50	"
Apprentices	2, at	75	"

The only value of these returns would be to show the proportion of skilled to unskilled labor, and the prevailing rates of wages in these two somewhat widely separated localities.

The census gives the following figures for this industry, viz :

Number of establishments	286
Number of hands employed	2,286
Number of men employed	2,248
Number of youth employed	38
Total wages paid	$1,025,618 00

In the returns we have given we have reason to believe that a very just and fair statement of the average in this State may be found. The census, it will be observed, gives all as men over sixteen years of age. In these trades there are very few boys go to learn their trades until they are sixteen, and consequently many of those enumerated as males above sixteen are apprentices in all the stages between sixteen and twenty-one. For the purpose of this inquiry, therefore, we take the proportions as shown in these returns, and present the following table as the result:

ACTUAL AVERAGE EARNINGS OF EACH CLASS FOR CENSUS YEAR.

Rate per day...	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year ..	Actual average earnings for yr.
$3 00	Foremen............................	114	$342 00	$82,957 89	$727 70
2 27	Skilled workmen	1,372	3,114 44	755,459 07	550 62
1 50	Second-class laborers.................	229	343 50	83,321 76	363 85
75	Boys, apprentices, &c	571	428 25	103,879 28	181 92
	Totals of census returns.........	2,286	4,228 19	1,025,618 00	....

This calculation gives an average of a little over 242½ days worked for the year, or 10 months and 2½ days, of 24 days each. This is believed to be about the real average time made. It will be observed that in the Massachusetts reports and also in the very excellent but rather *rose colored* essay of Mr. Lorin Blodget, which will be found in this report, that the quoted wages are treated to a great extent as averages, and that the short time worked that they indicate is attributed to "ease and choice," or love of leisure on the part of the workmen. This, all the information we have been enabled to gather leads us to regard as erroneous. The prevailing characteristic among workmen, on the contrary, is an anxiety to make the fullest time possible. That there are constitutionally worthless men—idlers from a slothful physical habit, or from the demoralization of drunkenness—is not to be denied; but to assume that these vices prevail to such a degree as to affect, in any appreciable sense, the average in a calculation like this, is certainly a mistake. In the inquiries instituted by the Bureau a good deal of attention was given to this special point, and the result would indicate that the idlers from these causes are about three in every one hundred workmen.

COTTON GOODS.

The two following very satisfactory returns have been received from cotton mills; the first from the Messrs. Garsed, of Frankford, and the other from the Harrisburg Cotton Mill Company. It is greatly to be regretted that business men engaged in this, as well as other industries, have not been able to see the ultimate good to be derived from this inquiry, or that the power and means had not been placed at the disposal of the Bureau that would have enabled it to procure fuller returns :

First return.

Card room hands	1 boss	at $3 00	per day.
Do....do	1	at 1 66	do.
Do....do	3 frame tenders, (women,)	at 1 33	do.
Do....do	4 helpers, (youth,)	at 1 00	do.
Spinning room...hands,	1 boss	at 4 00	do.
Do....do......do..	7 helpers, (youth,)	at 65	do.
Weaving room....do..	1 boss	at 3 00	do.
Do....do......do..	2 second bosses	at 2 33	do.
Do....do......do..	64 weavers, (women,)	at 1 42	do.
Beaming room....do..	1 boss	at 3 00	do.
Do....do......do..	3 beamers and twisters	at 2 16	do.
Do....do......do..	1 helper, (youth,)	at 50	do.
Cloth room......do..	1 boss.	at 3 00	do.
Do....do......do..	1 assistant	at 2 16	do.
Do....do......do..	1 assistant, (youth,)	at 75	do.
Do....do......do..	3 burlers, (women,)	at 1 00	do.
Doubl'g & spool'g room,	1 boss	at 2 00	do.
Do....do......do..	4 doublers, (women,)	at 1 00	do.
Do....do......do..	10 spoolers and rulers, (women,)	at 1 25	do.
Dyers' room	1 boss	at 3 00	do.
Do	5 dyers and sizers	at 2 00	do.
Do	1 sizers' assistant, (youth,)	at 1 50	do.

MISCELLANEOUS.

Engineer	1, at	2 33	do.
Driver	1, at	2 33	do.
Machinist	1, at	3 00	do.
Watchman	1, at	2 00	do.
General laborer	1, at	2 00	do.
Ceneral helpers, (youths,)	3, at	50	do.

Second return.

Spinners	3 foremen	at 2 41	per day.
Do	8 women	at 1 05	do.
Do	91 youth	at 50	do.
Weavers	7 men	at 2 00	do.
Do	67 women	at 92	do.
Do	7 youth	at 50	do.

Carders	13 men	at $1 57	per day.
Do	25 women	at 75	do.
Do	27 youth	at 62	do.
Dressers	2 men	at 2 45	do.
Do	1 women	at 1 16	do.
Do	6 youth	at 50	do.
Engineers	2 men	at 2 66	do.
Packers	2 men	at 1 85	do.
Do	8 women	at 66	do.
Machinists	6 men	at 2 40	do.
Watchmen and laborers,	5 men	at 1 58	do.

As these are all the returns we have from this industry, we must use them as conclusive of the wages and classification. The census gives under the head of "cotton goods (not specified)" as follows:

Number of establishments	121
Do....hands employed	12,281
Do....males above 16	3,729
Do....females above 15	5,965
Do....youth	2,587
Total wages paid	$3,386,248

These we classify as follows, under the guidance of the above returns, determining the average wages therefrom, rating *as bosses*, only those whose pay is $3 per day and over, and putting the foreman at less than that among the skilled workmen. It will be seen also that we put all over $2 among the skilled workmen; those at $2 as first class laborers, those below $2 as second class laborers; as youth, all above 62 cents, and as children all below it. The result shows 228 days as the average year's work.

TABLE OF CLASSIFICATION, WAGES AND EARNINGS IN COTTON MANUFACTURES.

Rate per day....	CLASS.	Number......	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
$3 16	Foremen	298	$941 68	$214,529 79	$719 89
2 37	Skilled workmen	1,007	2,386 59	543,702 80	539 92
2 00	Laborers, first class	746	1,492 00	339,900 26	455 63
1 60	Laborers, second class	1,044	1,670 40	380,539 68	364 50
1 09	Women	5,965	6,501 85	1,481,226 81	248 30
83	Youth	634	526 22	119,880 43	189 08
52	Children	2,587	1,345 24	306,468 23	118 46
	Totals of census tables	12,281	14,863 98	3,386,248 00	....

CARPENTERING AND BUILDING.

In this industry we have but one return, that of Mr. Ezra Cockill, Sr., of Schuylkill county, an extensive breaker builder and house carpenter. It is as follows:

Number of foremen	4, at $3 00 per day.
Number of carpenters	40, at 2 50 per day.

The classification that Mr. Blodget speaks of in his essay before alluded to, would be invaluable in its application to the object we have in view. In the absence of anything of the kind, we must substitute for it, for this year, estimates based upon the best data attainable. The above return of Mr. Cockill gives one foreman to every ten skilled workmen. He does not give any statement of the number of unskilled workmen who operate in conjunction with these, or who are a part of them, as helpers, and of whom there are always some employed. Mr. Blodget puts the wages in Philadelphia at from $2 to $3 per day for carpenters. As we cannot believe, and do not think any one else believes, that any skilled carpenters work in Philadelphia at the lowest of these figures, we put those who receive that rate, and are reckoned among the numbers of carpenters, down as these unskilled workmen, or, as we classify them, first-class laborers. Careful inquiry and observation leads us to put this class of workmen in this trade at the same proportion as foremen to the whole, viz: 10 per cent. The wages will also have to be reduced somewhat below Mr. Blodget's estimate, and Mr. Cockill's, to show an average for the whole State, inasmuch as the rates of wages generally in Philadelphia and Schuylkill range higher than in localities where the industries are not so diversified and extensive. For instance, in the coal region of Tioga, the wages of carpenters and blacksmiths are quoted at $2, and Hon. Mr. Burkholder, of Lancaster, informs us that as many, if not more, carpenters, machinists and blacksmiths are employed at less than $2 per day as there are who receive that much.

We estimate, therefore, the average wages for foremen in this trade, all over the State, at $2 75 per day; skilled workmen $2 25, and first class laborers at $1 87.

Our table then will stand thus: The census gives—

Number of establishments	1,846
Do......hands employed	10,538
Do......males above 16	10,436
Do......youth	102
Total amount of wages paid	$5,335,181 00

We estimate also, that at least 10 per cent. of the whole number are apprentices, the youth under 16, not being more than a very small portion of the whole number.

This calculation shows 239.7 days worked, on the average for the year:

CLASSIFICATION, WAGES AND AVERAGE EARNINGS.

Rate per day...	CLASS.	Number......	Earnings of each class per day...	Earnings of each class for year..	Actual avg. earnings for year...
$2 75	Foremen	1,053	$2,895 75	$694,133 51	$659 19
2 25	Skilled workmen	7,379	16,602 75	3,979,823 71	539 34
1 87	Laborers, first class	1,053	1,969 11	472,010 49	448 25
75	Apprentices, &c	1,053	789 75	189,213 29	179 68
	Totals of census returns..............	10,538	22,257 36	5,335,181 00	

CARRIAGE BUILDING.

The operatives in this industry we divide into five principal classes, viz: Wood-workers, blacksmiths, painters, trimmers and laborers; among the latter are included blacksmith's helpers, porters, filers, &c., whose rate of pay, as compared with the former, would indicate that they are not skilled workmen The names of those making the returns are not inserted, but instead, the number of the blank which was put upon it, in the order in which it was received.

TABLE OF RETURNS RECEIVED.

Number of blank,	Total No. of hands,	No. of foremen ...	Daily wages......	No. of woodwork's,	Daily wages......	No. of blacksmiths	Daily wages......	No. of painters...	Daily wages......	No. of trimmers ..	Daily wages......	Laborers, helpers, & other unskill'd hands..........	Daily wages......	No. of apprentices,	Daily wages......
5	101	2	$5 00	24	$3 30	8	$4 00	18	$2 75	14	$2 75	19	$1 95	16	80
6	13	....	......	2	2 50	3	2 50	2	2 50	1	2 25	......	......	5	60
7	12	....	......	2	2 50	4	2 50	2	2 50	1	2 50	......	......	3	75
8	36	1	3 00	7	2 50	11	2 25	5	2 25	5	2 25	......	......	7	60
15	13	....	......	4	3 25	2	3 00	3	2 50	1	3 50	......	......	3	75
Avg's	175	3	4 33	39	3 07	28	3 17	30	2 61	22	2 64	19	1 95	34	72

These returns are all from the localities where wages rule the highest in the trade, Philadelphia, Pottsville, Harrisburg, and Mount Joy in Lancaster county; that they are too high to be taken as an average for the State, is evident from the fact that at this rate only an average of 149.2 days could have been work in the year. To those familiar with this industry, the knowledge of this fact will be sufficient demonstration of the necessity of reducing the estimated rates very far below these returns, to give any thing like a true average. In the table following, however, the reduction is so great that it requires some explanation. This is not an industry that depends at all upon weather, the operations being always carried on in shops, nor are there any special seasons in which business is active—on the contrary, its operations run quite evenly throughout the whole year. There is, then, no loss of time except from sickness, dissipation, or change of employ from one shop to another. We cannot fairly reduce the time estimated to be worked in the year below a nine months' average, but it will be seen that even at the rate adopted below, there is only an average of 220 days worked in the census year. The census gives the following figures:

Total number of establishments returned	1,449
Do....do....hands employed	6,252
Do....do....males above 16	6,199
Do....do....females above 15	5
Do....do....youth	48

In our calculations we include the females among the youth, because we have not, and cannot get any information as to the proper classification to make of them, and because the wages usually paid to women conform more nearly to those paid to youth than to men.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS.

Rate per day...	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year..	Actual avg. earnings for year...
$2 50	Foremen	125	$312 50	$68,750 00	$550 00
1 90	Skilled workmen	4,251	8,076 90	1,776,847 45	417 98
1 50	Laborers	688	1,032 00	227,031 70	329 98
60	Apprentices, &c	1,188	712 80	156,811 85	131 99
	Totals of census tables	6,252	10,134 20	2,229,441 00	....

CARS—FREIGHT AND PASSENGER.

The only return received of this industry is that of the Harrisburg Car manufacturing company, whose enlightened and public spirited manager responded promptly to the application. The return is as follows:

Foremen	16, at $3 00 per day.
Blacksmiths	53, at 2 25 do.
Moulders	35, at 2 10 do.
Do....apprentices	7, at 1 00 do.
Machinists	30, at 2 25 do.
Do....apprentices	10, at 1 00 do.

Pattern makers	4, at $2 38	per day.
Do....apprentices	1, at 1 00	do.
Carpenters	230, at 2 00	do.
Do....apprentices	5, at 1 00	do.
Painters	17, at 2 00	do.
Do....apprentices	13, at 75	do.
Laborers	375, at 1 50	do.

The census returns give in this industry the following:

Total number of establishments	49
Do....do....hands employed	4,076
Do....do....males above 16	3,975
Do....do....females above 15	14
Do....do....youth	87
Total wages paid	$2,193,857 00

In all these tables we classify the workmen substantially, according to the returns received. Thus, in this the foremen are 2 per cent., the skilled workmen 46 per cent., laborers 47 per cent., and apprentices 5 per cent. of the whole. Here again are 14 women returned. It is presumable that they are employed about the upholstering. But as we have no data to go upon in regard to them, we classify the whole as above.

The table then is as follows:

CLASSIFICATION, WAGES AND AVERAGE EARNINGS.

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
$3 00	Foremen	81	$243 00	$74,209 37	$916 16
2 07	Skilled workmen	1,875	3,881 25	1,185,277 10	632 15
1 50	Laborers	1,916	2,874 00	877,677 94	458 08
91	Apprentices	204	185 64	56,692 59	277 90
	Totals of census returns	4,076	7,183 89	2,193,857 00	....

According to these rates of wages and classification, the averge time worked for the year in this industry was a little over 305 days. This is very full time, and would seem to indicate that the average wages should be a little higher. But inasmuch as the difference would not be great, and as we desire to leave the wages as near the rates returned as a fair regard for probabilities will admit, we will not disturb them.

CLOTHING.

We have received from this industry but one return, and that from Philadelphia. We give it as follows:

Number of tailors............	10, at $3 50 per day, 9 months in the year
Number of tailoresses........	10, at 2 00...do....9.....do....do....

This return is accompanied by the following remarks:

"The manufacture of clothing 'to order' is done by having the materials cut at the establishment and given to men and women foremen, who have others to do the work, foremen making from $6 to $7 per day and their hands $2, but the table is made to show the production of our labor employed singly."

If the above return is true, and a true presentation of the condition of the employees in this industry, the general representations made are outrageously false and mischievous. It was the earnest desire of the Chief of the Bureau that this should be made a special inquiry, but the character of the legislation under which we acted was so ineffective, the means at our disposal so very small, and the indisposition to submit to the inquiry voluntarily so palpable, that the effort had to be abandoned. It was the more desirable to investigate the condition of labor in this large branch of industry, because in it female labor is very largely employed, and, it has been especially charged for years, with oppressive exactions and inadequate compensation. The most we can do under the circumstances, for this year, is to submit it to the same test that we have applied to other industries, trusting that the importance of inquiry, indicated by our approximations, may impress the Legislature with the necessity for more efficient legislation.

We include in these analyses all the divisions in the census under the head of clothing, showing first the results of a table with wages rated according to this return, and of one reduced to the requirements of probable average time worked. The census gives as follows, under head of clothing:

Establishments, children..................................	12
Do........total hands............................	114
Do ....males above 16	38
Do........females above 15.......................	76
Do........youth..................................	—
Do........total wages paid........	$36,700 00

Establishments, men..	1,364
Do........total hands............................	17,973
Do........males above 16	7,781
Do.. .....females above 15.......................	9,917
Do........youth...............	275
Do........total wages paid......	$4,758,807 00

Establishments, women	162
Do........total hands employed	1,049
Do........males above 16	83
Do........females above 15	939
Do........youth	27
Do........total wages paid	$244,765 00

The grand total of all these will be as follows :

Total number of establishments	1,538
Do........hands employed	19,136
Do........males above 16	7,902
Do........females above 15	10,932
Do........youth	302
Total wages paid	$5,040,272 00

As the same facts with reference to the youth reported in the census will hold good here as in other trades, viz: That they do not represent the number of apprentices, we, in our classification, allow about the usual proportion, 10 per cent., to be of that class. Now if the rates in the above return are the average wages paid in this industry, say for 9 months of 26 days in the year, the earnings would be as follows:

We make the foremen, to be one to each establishment, and the apprentices to be 10 per cent. of each class, men and women.

Foremen	1,538	234 days, at, say	$5 00 per day	$1,799,460 00
Tailors	5,864	234 days, at	3 50....do	4,802,616 00
Tailoresses	9,975	234 days, at	2 00....do	4,668,300 00
Apprentices	1,759	234 days, at, say	60....do	246,963 60
	19,136			11,517,339 60

By looking at the statements in the return entered here, then at the totals of the census return, then at this extraordinary result, the preposterous exaggeration of such statements of wages are unmistakably seen. An analysis of the census return of the three divisions of children's, men's and women's clothing, will develop no reason why they should be classified separately, for it would seem that in children's clothing the earnings to each person are greater than in either of the others ; while in women's there is only about as much deficiency as would naturally result from the difference in the number of men employed as between that and men's clothing. Much of this discrepancy, between the wages quoted here and the census demonstration, might be accounted for if upon any just hypothesis we could assume that the hands who work intermittently, those untold and unknown thousands of overburdened women who toil at the needle in the intervals of household duty to eke out their insufficient incomes, were included in this return; but this assumption would be violent, for the returns indicate only a little over twelve hands to the establishment, and the number of establishments being so small as to demonstrate that only the larger ones have made returns, would be a very sure demonstration of the fact that these are the regular hands who pursue the calling exclusively for maintenance. The excess of earnings at the rates and for the time here given is equal to a little more than 56 per cent.; but as nine months is the time mentioned in the return, and that may easily be more than the average time made, we reduce the wages by 50 per cent., and give the result as the nearest approximation in our power to the true condition as to wages and earnings in this industry.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS IN CLOTHING MANUFACTURES.

Rate per day...	CLASS.	Number........	Earnings of each class per day..	Earnings of each class for year..	Actual avg. earnings for year...
$2 50	Foremen..........................	1,538	$3,845 00	$776,392 10	$504 80
1 75	Tailors..........................	5,864	10,262 00	2,072,119 17	353 36
1 00	Tailoresses..........................	9,975	9,975 00	2,014,172 13	201 92
50	Apprentices and youth............	1,759	879 50	177,589 60	100 96
	Totals of census returns..............	19,136	24,961 50	5,040,272 00	....

It will be seen that this table indicates an average of a fraction under 202 days worked in the year, or 8 months and ten days of 24 days each.

SADDLERY AND HARNESSMAKING.

In this industry we have one return, and that from the city of Lancaster; it is as follows:

Foreman....................................	1, at	$3 50	per day.
Saddlemaker....................................	1, at	2 00	do.
Harnessmakers....................................	6, at	2 00	do.
Collarmaker....................................	1, at	2 50	do.
Jobbers....................................	2, at	1 75	do.
Apprentices....................................	3, at	58	do.

The return of the census is as follows:

Number of establishments..............................	903
Do....hands employed..............................	2,488
Do....males above 16..............................	2,431
Do....females above 15..............................	26
Do....youth..............................	31
Total wages paid..............................	$662,347 00

The census here, it will be seen, gives not quite three hands to each establishment; as shops so small would hardly have a foreman, the proprietor most probably acting in that capacity, we will estimate the number of foremen at one-fourth the number of establishments, and throw the women and youth among the apprentices, as in other trades where women appear to be exceptionally employed.

At the wages noted in the return, it will be seen that only 133 days' work could have been averaged in these 903 establishments. As this is far below the time that should be made in a trade not influenced by weather or change of season, and, as the return is evidently from a large concern, in which wages above the average are paid, we estimate the average of foremen's wages at $2 50, and of skilled workmen at $1 75 per day.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS IN SADDLERY AND HARNESSMAKING.

Rate per day...	CLASS.	Number......	Earnings of each class per day...	Earnings of each class for year..	Actual avg. earnings for year...
$2 50	Foremen	225	$562 50	$87,920 96	$390 75
1 75	Skilled workmen	2,015	3,526 25	551,168 05	273 53
60	Apprentices	248	148 80	23,257 99	93 78
	Totals of census returns..........	2,488	4,237 55	662,347 00	....

This table, even at these low wages, only shows an average of a small fraction over 156 days, or six months of 24 days each and 12 days over.

IRON—ROLLED, CAST, FORGED, &c.

In this industry, which the census divides into eleven separate divisions, we have received three returns, one each from Philadelphia, Pottsville and Williamsport. We have notes of the statements received at Allentown, upon personal application. These latter will be put first on the list.

Allentown, per furnace, 2 keepers .... at $2 58 per day.
Do........do...... 6 helpers .... at 2 40 do.
Do........do...... 8 fillers .... at 2 40 do.
Do........do...... 2 engineers................. at 2 25 do.
Do........do...... 2 cindermen .... at 2 00 do.
Do........do...... 1 founder.................... at 3 00 do.
Do... ....do...... 8 laborers .... at 1 65 do.

This was given by the very courteous manager of the Allentown iron company's works, as the outfit of hands and their pay, of an ordinary furnace, say of 16 feet bosh. Full time can be made by the hands, inasmuch as the furnaces are working day and night, so that the only time not lost voluntarily, is from sickness, loss of employment or dissipation.

Philadelphia,	2 draughtsmen	at $3 00	per day.
Do	2 blacksmiths and boiler makers	at 3 00	do.
Do	3 patternmakers	at 2 25	do.
Do	2 mill-wrights	at 3 00	do.
Do	10 machinists	at 2 66	do.
Do	4 laborers	at 1 62	do.
Do	1 engineer	at 2 33	do.
Do	8 apprentices	at 53	do.

"Our works have the tools and buildings capable of employing one hundred hands. Our business is dull now and has been for four months past."

The time given, as worked in a year in this return, is 300 days.

Williamsport,	1 foreman	at $4 00	per day.
Do	3 foremen	at 3 50	do.
Do	1 draughtsman	at 4 00	do.
Do	1 engineer	at 2 00	do.
Do	1 watchman	at 2 00	do.
Do	23 machinists	at 3 00	do.
Do	5 patternmakers	at 2 75	do.
Do	3 blacksmiths	at 3 00	do.
Do	4 helpers	at 2 00	do.
Do	7 moulders	at 2 75	do.
Do	11 laborers	at 1 75	do.
Do	3 apprentices	at 75	do.

Pottsville—furnaces—	85 furnace men	at $1 95	per day,	(12 hours.)
Do	4 carpenters	at 2 50	do.	(10 hours.)
Do	2 blacksmiths	at 2 50	do.	do.
Do	59 laborers	at 1 50	do.	do.

Pottsville—	passenger rail mills—	2 machinists	at $2 12½	per day.
Do	do	2 carpenters	at 2 37½	do.
Do	do	2 moulders	at 2 29	do.

Pottsville—passenger rail mills—291 laborers, from boys at fifty cents to one dollar per day, to laborers, outside, from $1 41 to $1 58 per day, and laborers, inside, from $1 12 to $3 75 per day. Puddling furnaces—160 puddlers, at $6 60 per ton, should make $4 per day. Fifty rail mill men, at from $2 50 to $5 per day.

The census gives the following figures in the iron manufacturing industries—machinery, in the four census divisions, not specified, cotton and woolen, railroad repairing, and steam engines and boilers being included:

CENSUS TABLES OF IRON MANUFACTURES.

IRON.	No. of establishments..........	Total hands employed.........	Males above 16 years	Females above 15 years	Youth..........	Total wages paid.
Blooms	43	1,473	1,422	2	49	$707,589 00
Forged and rolled	135	21,865	20,974	20	871	12,243,483 00
Anchors and cable chains.....	4	48	33	....	15	18,500 00
Bolts, nuts, rivets, &c.........	29	1,553	1,230	18	305	805,323 00
Nails and spikes, cut & wro't..	31	2,036	1,594	22	420	1,106,214 00
Pipe, wrought	8	1,288	1,195	....	93	709,710 00
Railing........................	12	55	54	....	1	18,176 00
Ship building and engines....	1	352	352	....	....	210,000 00
Pigs...........................	136	10,861	10,629	10	222	5,014,455 00
Castings, (not specified)......	443	7,587	7,259	2	326	3,813,037 00
Stoves, heaters, &c............	81	2,052	1,897	....	155	1,139,751 00
Machinery, four divisions	477	17,690	17,314	54	322	9,944,130 00
Totals.....................	1,400	66,860	63,953	128	2,779	35,730,368 00

Two of the preceding returns include book-keepers and clerks which we have left out because they were not intended to be included in the census return, (as we are informed by Mr. Walker, the superintendent of the census;) only one of them includes foremen or overseers, which all large establishments have and must have, and, as usual, the return of youth cannot include apprentices, and we know nothing of the place the females have in this industry; we therefore divide the whole by the percentages indicated by an average of the returns, allowing 4 per cent. to be foremen and 10 per cent. apprentices, as is estimated generally to be the average.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS IN IRON MANUFACTURES.

Rate per day...	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
$3 50	Foremen..........................	2,005	$7,017 80	$1,841,007 24	$918 20
3 00	Skilled workmen	20,728	62,184 00	16,313,931 30	787 04
1 80	Labor, first class..................	19,389	34,900 00	9,155,992 65	472 22
1 50	Labor, second class................	18,052	27,078 00	7,103,896 58	393 52
75	Apprentices........................	6,686	5,014 50	1,315,540 23	193 75
	Total of census tables	66,860	136,194 00	35,730,368 00	....

It will be seen that we have rated foremen's wages less than in the return, while the other classes are put within a few cents of the exact average wages reported. The time worked at these rates to earn the amount paid as per census return, is ten months of twenty-six days and two days over.

LUMBER.

In lumber we have received one return from Williamsport, which is as follows:

Foremen, four, at $3 00 per day for the year; engineer, one, at $1,200 per year; filers, three, at $4 00 per day, employed eight months; sawyers, &c., sixty-three, at $2 15 per day, employed eight months; wages of men, from $2 25 to $2 75 per day; wages of boys, from $1 25 to $2 00 per day.

In this return it will be seen that we are left entirely to surmise as to the proportion of boys to the whole number, and as to their average wages We must, therefore, estimate in both these particulars. In the matter of planed lumber and staves and shooks the conditions are so near the same that we include them in one table. The figures from the census are as follow:

Number of establishments for planed lumber.........	183	
Number of hands employed........................	1,859	
Number of males above 16.........................	1,813	
Number of females above 15......................	2	
Number of youth.................................	44	
Total amount wages paid.................................		$958,817 00
Number of establishments for staves, shooks, &c	1	
Number of hands employed, men..................	3	
Total amount wages paid.................................		1,500 00
Total amount paid in both divisions..................		960,317 00

CLASSIFICATION, WAGES AND AVERAGE EARNINGS IN LUMBER.

Rate per day....	CLASS.	Number........	Earnings of each class per day ..	Earnings of each class for year ..	Actual avg. earnings for yea
$2 50	Foremen..........................	186	$465 00	$123,253 37	$662 59
2 25	Skilled workmen.................	920	2,070 00	548,677 49	596 38
1 50	Laborers..........................	710	1,065 00	282,291 14	397 59
50	Youth, &c........................	46	23 00	6,095 00	132 50
	Totals of census returns...............	1,862	3,623 00	960,317 00	....

This table shows an averaage of 265 days worked in the year. As we have no information as to the employment of apprentices here, we assume the youth to be errand boys and the like.

The census return in the matter of sawed lumber, which is the subject of the return from Williamsport, gives the following figures :

Number of establishments	3,738
Do....hands employed	17,424
Do....males above 16	17,275
Do....females above 15	15
Do....youth	134
Total wages paid	$5,260,076 00

A test of the wages as given in the Williamsport return as an average for the State, would show that only four months' work was done in the census year ; this is just half the time named in the return, and proves that the wages paid over the State will average at least 40 per cent. less than is here given as prevailing at Williamsport. The table below shows 171 days and a fraction over as the average time worked at these wages in the year.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS FOR CENSUS YEAR.

Rate per day....	CLASS.	Number........	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
$2 50	Foremen	1,742	$4,355 00	747,852 22	$429 25
2 00	Skilled workmen	7,864	15,728 00	2,700,878 33	343 44
1 50	Laborers	6,250	9,375 00	1,609,913 13	257 58
75	Boys, &c	1,568	1,176 00	201,432 32	128 46
	Totals of census returns	17,424	30,634 00	5,260,076 00	....

It will be seen that in this classification we have entirely disregarded the statements of the return received, as to the foremen and engineers being employed the whole year. It may be proper to explain, that this is not because we discredit the statements contained therein, for the character of the gentlemen making them, as well as corroborative information, indicate the facts as there stated to be true of Williamsport. But as the operations in this industry are found everywhere throughout the State, and as, where the operations are not so concentrated and extensive, the wages are not so high, we are compelled to modify the rates according to the census returns, and the probabilities as to time worked, in order to carry out the plan we have adopted to present an approximation to the actual average earnings of each class of wage-workers within its borders.

LIQUORS.

In the manufacture of liquors the only return we have is from one of the principal breweries in Philadelphia. It is as follows:

Superintendent	1, at	$8 00 per day.
Clerks	3, at	4 00 do.
Coopers	6, at	2 50 do.
Engineers	2, at	2 50 do.
Draymen	12, at	2 00 do.
Cellarmen	12, at	2 00 do.
Brewerymen	8, at	2 00 do.
Maltsters	10, at	2 00 do.
Watchmen	2, at	2 00 do.
Wash-housemen	4, at	2 00 do.

The census gives the figures in this industry as follows:

Number of establishments	246
Do....hands employed	1,583
Do....males above 16	1,569
Do....females above 15	2
Do....youth	12
Total wages paid	$773,267 00

We rate in the following table the superintendent and clerks under our general head of foremen, as they evidently sustain that position in this brewery. The coopers and the engineers are the skilled workmen, and of the remainder for the purposes we have in hand we make first and second class laborers and boys, including the women among the latter, for the reasons already given in other trades. We divide them as 7 per cent. foremen, 13 per cent. skilled workmen, 50 per cent. laborers, first class, 25 per cent. laborers, second class, and 5 per cent. boys. We have somewhat reduced the average of foremen's wages, and introduced the second class labor, because we have knowledge of its being a closer approximation to the general average.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS FOR CENSUS YEAR.

Rate per day...	CLASS.	Number........	Earnings of each class per day..	Earnings of each class for year..	Actual avg. earnings for year..
$3 50	Foremen	110	$385 00	$94,894 80	$862 68
2 50	Skilled workmen	206	515 00	126,936 20	616 19
2 00	Laborer's, first class	792	1,584 00	390,422 94	492 95
1 50	Laborers, second class	396	594 00	146,409 12	369 72
75	Youth, &c	79	59 25	14,603 94	184 86
	Totals of census tables	1,583	3,137 25	773,267 00	....

The table shows a little over 246 days, as the average time worked in the year.

SUGAR REFINED.

We have one return from this industry from Philadelphia, which is as follows:

Clerks	2 at	$3 00	per day,	52	weeks.
Sugar boilers	2 at	5 00	"	52	"
Engineers	4 at	3 00	"	52	"
Coopers	12 at	3 00	"	30	"
Bosses of gangs	2 at	2 50	"	41	"
Teamsters	5 at	2 00	"	30	"
Watchmen	2 at	2 00	"	52	"
Laborers	30 at	2 00	"	30	"

The census gives figures in this industry as follows:

Number of establishments	15
Do.....hands employed	1,241
Do.....males above 16	1,240
Do.....youth	1
Total wages paid	$663,408 00

Upon these data we make the following exhibit, guided by the same general considerations as have controlled our estimates in other industries:

CLASSIFICATION, WAGES AND AVERAGE EARNINGS FOR CENSUS YEAR.

Rate per day	CLASS.	Number	Earnings of each class per day	Earnings of each class for year	Actual avg. earnings for year
$3 00	Foremen or clerks	37	$111 00	$29,115 71	$786 91
3 15	Skilled workmen	211	664 65	174,340 91	826 26
2 00	Laborers, first class	621	1,242 00	325,782 53	524 60
1 50	Laborers, second class	310	465 00	121,971 70	393 45
75	Youth, &c	62	46 50	12,197 15	196 40
	Totals of census returns	1,241	2,529 15	663,408 00	....

PRINTING AND PUBLISHING.

We have received three returns of this industry—one from Philadelphia, one from Wilkesbarre and one from Lancaster.

PHILADELPHIA.

Foremen	5, at	$4 50 per day.
Pressmen	3, at	3 17 do.
Compositors	14, at	2 60 do.
Engineer	1, at	2 67 do.
Wareroom men	2, at	2 00 do.
Press feeders, boys	11, at	1 00 do.
Apprentices	14, at	75 do.

WILKESBARRE.

Clerk	1, at	$3 00 per day.
Foreman	1, at	2 50 do.
Apprentices	2, at	87 do.

LANCASTER.

Foremen	7, at	$3 00 per day.
Compositors, men	35, at	2 00 do.
Do ......women	5, at	1 00 do.
Do......apprentices	41, at	42 do.
Folders, women	30, at	38 do.
Bookbinders, men	2, at	2 00 do.
Do......apprentices	5, at	33 do.
Pressmen	2, at	3 00 do.
Do.....women	3, at	38 do.
Do.....apprentices	6, at	60 do.

The first of these returns is of a book and job printer; the second a newspaper, publisher, printer, bookbinder and stationer; the third, a printing and publishing company. As these include all the divisions given in the census, we consider them altogether. The following are the census figures:

Printing and publishing (not specified) establishments	77
Do....hands employed	3,117
Do....males above 16	2,664
Do....females above 15	307
Do....youth	146
Do....total wages paid	$2,054,975 00

Printing and publishing book establishments	2
Do....hands employed	16
Do....males above 16	14
Do....females above 15	2
Do....total wages paid	$6,625 00

Printing and publishing newspaper establishments	124
Do....hands employed	1,199
Do....males above 16	1,018
Do....females above 15	66
Do....youth	115
Do....total wages paid	$673,084 00

Printing and job establishments	104
Do....hands employed	1,032
Do....males above 16	786
Do....females above 15	116
Do....youth	130
Do....total wages paid	$460,965 00

As these several divisions are so intimately connected with each other, the differences between them (with the exception of the book business) so trifling, and in that the amount so small as not to affect the whole average appreciably, we consolidate them and present them as one.

The total number of establishments are	307
Do.....do.....hands	5,364
Do.....do.....males above 16	4,482
Do.....do.....females above 15	491
Do.....do.....youth	391
Total wages paid in all	$3,195,649 00

An examination of the returns given above will show that out of 187 employees, there are of the whole 7 per cent. foremen at $3 50 per day, 31 per cent. skilled workmen at $2 25 per day, 42 per cent. apprentices at 60 cents per day, and 20 per cent. females at 47 cents per day.

We believe this proportion of apprentices to be too large, and the compensation of the females to be too small. In making our table, we reduce the percentage of apprentices to 20, and put that of women to 10 per cent., while we estimate their average pay at $1 00 per day. We also increase the rate of skilled workmen's pay to $2 50 per day, as a nearer average.

CLASSIFICATION, WAGES AND AVERAGE EARNINGS FOR YEAR.

Rate per day....	CLASS.	Number.......	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
$3 50	Foremen..........................	322	$1,127 00	$302,434 62	$939 25
2 75	Skilled workmen	3,433	9,440 75	2,533,459 96	737 97
1 00	Females above 15	536	536 00	143,776 98	268 24
75	Apprentices and youth.............	1,073	804 75	215,977 44	201 29
	Totals of census returns.......	5,364	11,908 50	3,195,649 00	....

At the rates and classifications here exhibited the average time worked was a small fraction over 268 days.

Below we give a recapitulation table of all the manufacturing industries of which we have received returns, as shown in the preceding pages.

CLASSIFICATION, WAGES AND EARNINGS IN MANUFACTURING INDUSTRIES FOR WHICH RETURNS HAVE BEEN RECEIVED.

CLASS.	Percent'gs of the whole number,	Number.......	Avg. daily wages	Earnings of each class per day...	Earnings of each class for year...	Actual avg. earnings for year...
Foremen................	5	7,836	$2 88.4	$22,602 93	$5,137,451 58	$655 62
Skilled workmen.......	37	57,125	2 42.5	138,452 58	33,262,621 54	582 27
Laborers, first class.....	15	22,601	1 82	41,187 11	10,684,108 87	472 72
Laborers, second class..	20	29,595	1 50	44,496 90	10,833,052 75	366 04
Females above 15.......	11	16,476	1 03	17,012 85	3,639,174 92	220 87
Youth, apprentices, &c..	12	17,758	68	12,140 20	2,899,639 34	163 28
	......	151,391	....	275,892 57	66,456,049 00	....

This shows the results reached upon the basis we have adopted, (and which is explained by the tables presented in the preceding pages,) for all the manufacturing industries of which we have received any returns.

An examination of the census return will show that the percentage of females of the total hands employed in such industries in the State is 13 per cent., while in those included in our returns they are only 11 per cent. We do not, however, regard this difference as of sufficient importance to affect our approximation materially, and therefore in the following table of approximate totals, we preserve the proportions indicated in the last table. The grand totals of the census in manufacturing industries are as follows:

Total number of establishments..............................	37,200
Total number of hands employed............................	319,487

Total number of males above 16	256,543
Total number of females above 15	43,712
Total number of youth	19,232
Total wages paid	$127,976,594 00

These classified and rated as per the last table and explanations will show the approximate result for the State.

CLASSIFICATION, WAGES AND EARNINGS IN MANUFACTURES FOR THE STATE.

CLASS.	Percentages of the whole number...	Total hands employed.........	Avg. daily wages..	Earnings of each class per day....	Earnings of each class for year....	Actual avg. earnings for year....
Foremen, &c.	5	15,974	$2 88.4	$46,069 01	$10,199,145 15	$638 48
Skilled workmen	37	118,210	2 42.5	286,659 25	63,463,038 27	536 87
Laborers, first class.	15	47,924	1 82	87,221 68	19,309,871 05	402 92
Laborers, second class.	20	63,897	1 50	95,845 50	21,219,084 18	332 08
Females above 15	11	35,144	1 03	36,198 32	8,013,888 48	228 03
Youth, apprentices, &c.,	12	38,338	68	26,069 84	5,771,566 87	150 54
Totals of census tables	......	319,487	....	578,063 60	127,976,594 00	....

General average daily wages, $1 80; general average time worked, 221 days.

DOMESTIC SERVANTS.

The census gives for Pennsylvania, under the head of domestic servants, 84,343. These we assume to be mainly, if not entirely, females. Very few men are employed in our State in capacities that would lead to their being returned in the census blanks as domestic servants, inasmuch as those who would otherwise be so reported are given as agricultural laborers, hostlers, &c. As to the rates of compensation received by domestic servants—this is more difficult to determine. In the large cities, competent and well conducted servants frequently are paid as much as $4 per week, in addition, of course, to their board, while it is probably very near the mark to say $2 00 per week would be the average for adults. This estimate would, nevertheless, be too high to apply to the whole, inasmuch as a very considerable proportion of them are young girls, who may be regarded as learners, and child nurses, whose compensation is from 50 cents to $1 00 per week. The compensation of servants depends also very largely upon the circumstances of the employers, their ability to pay and fastidiousness as to the quality of the service required. Nor is it of very great importance, in the inquiry we are making, whether our estimate is too high or too low, because the condition of servant, as it is understood in this State, is not to be regarded in any general sense as a permanent one; being assumed almost invariably as a temporary expedient, a means of bridging over an exceptional pecuniary difficulty, and sometimes, though not nearly so often as it should be, as the means of acquiring a knowledge of practical housekeeping, that will fit the person so learning to fill with credit to herself and blessing to her family her future relation of wife and mother. Throughout the country districts the wages of domestic servants, under the same general conditions, may be put at $1 00 per week, with board. We believe from our observation and information derived from inquiry, that an estimate of $1 25 per week for the whole State will not be far from the truth. For the reasons given here we do not include this class in our recapitulations.

AGRICULTURAL LABORERS.

The number of agricultural laborers is put by the census at 68,897. To a considerable extent the remarks applied to the subject of domestic servants will also apply to these. The occupation of farm laborers is not to an appreciable degree adopted as a profession or life's pursuit in this State, but only as a preparation or intermediary stage to the business of farming or some other gainful pursuit. The wages of adult farm laborers vary from $12 00 to $20 00 per month and found, as it is called; in other words, with board; and of youth, from $3 00 to $8 00 per month, with board likewise. In the busy seasons, as harvest time, &c., the daily wages of extra hands will often reach as much as is paid to ordinary skilled workmen; but as this is only for a short time, and regular hands of the farm are usually engaged by the month and sometimes by the year, and as these temporarily employed hands are also transitory residents, and often the skilled workmen, mechanics, &c., of the neighborhood, they will hardly have been reckoned in the enumeration of this class of workmen in the census return. We, therefore, estimate the average daily earnings of this class of workmen upon the basis for the whole State of, say $16 00 per month and found. In order to determine somewhat nearly the proportion their earnings bear to those of other laborers, we must add to the monthly wages the value of the additional compensation they receive in the way of board and lodging, and even generally, if not always, washing.

This, again, cannot be predicated upon the cost of the accommodation to the employer, but upon the charges usually made by those who furnish such accommodations by keeping boarding houses, either exclusively, or as incidental to their other pursuits. In the cities, and large industrial districts, such as the mining regions, &c., the usual charge in workmen's boarding houses may be put at $5 00 per week in the census year; it is somewhat less now, probably about an average of $4 50. Away from these more crowded and busy quarters the charges would be lower. We are inclined to put the average over the State at, say $3 00 per week. This would bring the annual compensation of this class of laborers, supposing full time to be made up to $348 00 per year. But making deduction for the usual deficiency of time made, we may set them down at $300 per year, and class them among second class laborers.

BOOK-KEEPERS, ACCOUNTANTS AND CLERKS IN STORES, &C.

The census tables of occupations give the following figures:

Book-keepers and accountants in stores	2,240
Clerks in stores	20,467
Salesmen and saleswomen	5,772
	28,479

In these occupations, we have no data to go upon except common report. We received one return from Philadelphia, but it is very incomplete, simply saying they are not manufacturers, but jobbers in straw and millinery goods. Their salesmen, of whom they employ five, they pay according to what they sell. Their saleswomen, of whom they employ nine, from learners to experienced hands, earn from $2 to $8 per week, while they employ from four to eight milliners in seasons of from six to nine months in the year, who earn from $4 25 to $12 per week.

Mr. Blodget, in his essay before alluded to, puts the pay of accountants in the city of Philadelphia, at from $2 to $3 50 per day.

There can be no doubt, but that the skilled workmen in mechanical and manufacturing occupations, are better paid than the masses of those who are called clerks in stores. The fancied greater ease and gentility of the life of the merchant over that of the mechanic, is probably the principal cause of a competition for such employment, that effectually closes the door to adequate compensation, while a small proportion of the whole who, through their superior ability and aptness, are valuable employees, receive full and sufficient compensation; common report and representation are very wide of the mark if the great majority are not very poorly paid. In our estimate, we put the wages as near the truth as we have the means of approximating it.

We estimate one-third of the book-keepers to be first class, say at an average of $4 per day, or $1,200 per year; two-thirds at $2 50 per day, or $750 per year.

Of clerks in stores we will call 33 per cent. first-class, at an average of $2 00 per day; 50 per cent. second-class, at $1 25 per day, and 17 per cent. youth, at say, 50 cents per day.

Of salesmen and saleswomen we make the proportions of male and female the same as in the Philadelphia return, viz: 35.7 per cent., males at $1 50 per day; 64.3 per cent., females at 86 cents per day. This, of course, is liable to the charge of being mere speculation, and yet we have strong conviction that thorough and authoritative inquiry would demonstrate that it is rather above than below the average.

Our exhibit then would be as follows:

Book-keepers, &c....	1st class....	747....	at per year.....	$1,200 00
Do..............	2d class....	1,493.........	do........	750 00
Clerks	1st class....	6,754	do........	600 00
Do..............	2d class....	10,234	do........	375 00
Do..............	Youth......	3,479	do........	150 00
Salesmen........................		2,060	do........	450 00
Saleswomen......................		3,712........	do........	258 00

EMPLOYEES OF RAILROAD COMPANIES, &C., (NOT CLERKS.)

The census gives the following figures under the above heading:

Employees of railroad companies, (not clerks,)	18,081
Do......street railroad companies, (not clerks,)	1,348
Do......telegraph companies, (not clerks,)	1,210
Total number of employees	20,639

Of the employees of railroad companies, we assume that there are included engineers, firemen, conductors, brakemen and baggage masters, and laborers on repairs. In the absence of any information on the subject, other than is derived from general observation, we divide these between the five classes, as 15 per cent. each, of the three first, 35 per cent. of the fourth and 20 per cent. of the fifth.

Of employees of street railway companies, it is to be assumed that they represent the conductors, drivers, stablemen and laborers on road repairs. These we divide equally between the three classes.

Of the telegraph companies' employees, we assume are included those having charge of repairs, their laborers and messengers, who are youth. These we divide as 20 per cent. foremen, or supervisors of divisions; 50 per cent. laborers, and 30 per cent. messengers, who are mainly youth.

In the matter of wages, we have only common report to guide us. How near, alike in classification and wages we have been able to come to the truth, we must leave to those who are better informed to determine.

RAILROAD EMPLOYEES.

Upon the plan we have proposed, the following will be the exhibit in these employments, on an estimate of 275 days average time worked in the year:

Engineers	2,712, at	$3 00	per day average,	$825 00
Firemen	2,712, at	2 00	do	550 00
Conductors	2,712 at	2 75	do	765 25
Brakemen and baggagemasters	6,328, at	1 75	do	481 25
Laborers	3,617, at	1 50	do	412 50

STREET RAILWAYS.

Conductors	449, at	$2 25	per day average,	$618 75
Drivers	449, at	2 00	do.	550 00
Laborers	450, at	1 50	do.	412 50

TELEGRAPH COMPANIES EMPLOYEES.

Foremen	242, at	$2 50	per day average,	$687 50
Laborers	605, at	1 50	do.	412 50
Youth	363, at	75	do.	206 25

These will end our extracts from the census tables of occupations, not because they present even an approach to the total wage-working population of the State in numbers, but because they are all the classes that are sufficiently defined as to their character to enable us to use them in illustration of the exhibit we desire to make. Of the remainder, the return is made in such manner that, with the means at our disposal, we cannot find the data upon which to base a division of the wage-workers from the whole number. There are given as being engaged in all occupations in the State 1,020,544 persons over ten years of age. When it is remembered that there are included in this number all the proprietors of every kind of business, and all persons engaged in the professions, it will be conceded that the number we present is a very fair representation of the vast army of workers, whose sturdy efforts, persistently applied, are rapidly pushing forward the position of the Commonwealth to the first place, as to wealth and population; and may we not reasonably hope, under the influence of growing intelligence, in virtue and wisdom, in the galaxy of States. We now present a recapitulation of the whole of our inquiries, giving columns of classes, numbers, daily wages, estimated days worked, daily earnings of each class in each trade, annual earnings of the same, and actual annual average earnings of each individual of each class. We give all the figures, that those interested may see the method by which we reach our conclusions.

RECAPITULATION OF CLASSIFICATION, WAGES AND EARNINGS FOR THE STATE.

CLASS.	Number	Daily wages....	Days worked...	Daily earnings of each class.....	Annual earnings of each class ...	Actual av'ge annual earnings..
FOREMEN, FULL TIME HANDS, &C.						
Mining..................	6,210	$3 08	289.3	$19,126 80	$5,533,383 24	$891 20
Manufacturing...........	15,974	2 88.4	221	46,069 01	10,181,251 21	637 36
Book-keepers, &c., 1st class	2,240	3 00	300	6,720 00	2,016,000 00	900 00
Engineers, railroad.......	2,712	3 00	275	8,136 00	2,237,400 00	825 00
Conductors	2,712	2 75	275	7,458 00	2,050,950 00	756 25
Totals and general avgs.	29,848	2 93	251.6	87,509 81	22,018,984 45	737 70
SKILLED WORKMEN.						
Mining..................	36,368	$3 00	192.5	$109,104 00	$21,002,520 00	$577 50
Manufacturing...........	118,210	2 42.5	221	286,659 25	63,351,694 25	535 92
Book-keepers, &c., 2d class	6,754	2 00	300	13,508 00	4,052,400 00	600 00
Firemen, railroad.........	2,712	2 00	275	5,424 00	1,491,600 00	550 00
Brakemen, &c	6,328	1 75	275	11,074 00	3,045,350 00	481 25
Conductors, 2d class	449	2 25	275	1,010 25	277,818 75	618 75
Drivers of cars...........	449	2 00	275	898 00	191,950 00	427 50
Foremen telegraph.......	242	2 50	275	605 00	166,375 00	687 50
Totals and general avgs.	171,512	2 49.7	218.5	428,282 50	93,579,708 00	545 61
LABORERS—FIRST CLASS.						
Mining	16,140	$2 14	194.1	$34,539 60	$6,704,136 36	$415 37
Manufacturing............	47,924	1 82	221	87,221 68	19,275,991 28	402 22
Railroad laborers.........	3,617	1 50	275	5,425 50	1,492,012 50	412 50
Street railroad laborers...	450	1 50	275	675 00	185,625 00	412 50
Telegraph laborers	605	1 50	275	907 50	249,562 50	412 50
Salesmen in stores........	2,060	1 50	300	3,090 00	927,000 00	450 00
Totals and general avgs.	70,796	1 86.2	218.7	131,859 28	28,834,327 64	407 42
LABORERS—SECOND CLASS.						
Mining..................	12,396	$1 77	180.7	$21,940 92	$3,964,724 24	$319 84
Agricultural laborers.....	68,897	1 50	200	103,345 50	20,669,100 00	300 00
Manufacturing............	63,897	1 50	221	95,845 50	21,181,855 50	331 50
Clerks, second class.......	10,234	1 25	300	12,792 50	3,837,750 00	375 00
Totals and general avgs.	155,424	1 50.5	212.2	233,924 42	49,653,429 74	319 47
FEMALES.						
Manufacturing...........	35,144	$1 03	221	$36,198 32	$7,999,828 72	$227 63
Saleswomen	3,712	86	300	3,192 32	957,696 00	258 00
Totals and general avgs.	38,856	1 01.3	277.4	39,390 64	8,957,524 70	230 53
APPRENTICES AND OTHER YOUTH.						
Mining..................	9,646	$ 90.4	173	$8,719 98	$1,508,556 54	$156 39
Manufacturing...........	38,338	68	221	26,069 84	5,761,434 64	150 28
Clerks	3,479	50	300	1,739 50	521,850 00	150 00
Telegraph messengers, &c.	363	75	275	272 25	74,868 75	206 25
Totals and general avgs.	51,826	71	213.7	36,801 57	7,866,709 93	151 79
Grand totals	518,262				210,910,684 46	

It is seen by the foregoing table that, according to our approximation, there are

29,848	males, whose average earnings per year are	$737 70
171,512	males......do......do ....do	545 61
226,220	males......do......do...........do	346 95
38,856	females ....do......do...........do	230 53
51,826	youth .....do......do...........do	151 79

We now estimate that, say 30 per cent., of the females are working for their own individual support, as distinct from those whose labor goes to aid in the support of families, while we will say 20 per cent. of youth may be put in the same category. After these are deducted the earnings of the remainder go to swell the earnings of the heads of families among the several classes of male workmen. Of these we put none to the credit of full time hands, &c., because, from the fact that they are better paid, the necessity does not exist for aid from such sources. We must also make an allowance for the proportion of male workmen who have families to those who are single and work for themselves alone. We assume the latter to be of skilled workmen 15 per cent., and of laborers 25 per cent. This estimate will give heads of families among skilled workmen 145,786, and 25,726 single men; among laborers it will give as heads of families 169,665, and 56,555 single men. This shows an excess of laborers' families over the families of skilled workmen of 23,879, or about 14 per cent.; but as from the more liberal incomes of skilled workmen, the necessities are not so great, we estimate that a much smaller number resort to the earnings of wives and children to add to the means of family support, and we therefore increase this difference by 16 per cent, giving to laborers' families 70 per cent. of the earnings of females and youth, (reduced as before mentioned,) and 30 per cent. to skilled workmen. Our conclusions will thus make the following exhibit:

Foremen and full time hands	29,848	yearly earnings,	$737 70
Skilled workmen with families	135,786	do	571 47
Skilled workmen single	25,726	do	545 61
Laborers with families	169,665	do	398 78
Laborers single	56,555	do	346 95
Females, single	11,656	do	230 53
Youth, self-supporting	10,365	do	151 79

In adopting the plan here presented of approximating the actual average annual earnings of the different classes of wage workers, we have been governed by the consideration that the importance of determining, as nearly as possible, the earnings of the people is greater than a comparison of quoted wages. In the Massachusetts report their statements are generally based upon the latter. But the practicability of reaching reliable conclusions, through means of the five thousand dollars they had to expend in payment for *bona fide* returns and inquiries, gave them a very great advantage over this Bureau with its very small appropriation for such purposes.

We know that the results reached are peculiarly open to criticism at the hands of those who do not understand the subject, or who would prefer that the question should not be raised at all; but we feel equally sure that to the thoughtful student of *politico-social* economy, who is well enough informed to realize the gravity of the situation, and brave and humanitarian enough to wish for and seek a remedy, they will be suggestive and helpful. The only suggestion we wish to add is, that if it is conceded that they are too speculative, that the classification of the workmen is erroneous, and presents too large a proportion of underpaid workmen, still, any alteration that can be made within reason or probability, will not increase the general average earnings more than forty or fifty dollars per year.

Now, a few extracts from the Massachusetts Labor Report will serve as criterion by which to test the general correctness of the conclusions we have reached. It will be noted that the tables we extract are made up from returns actually received from employers, and give their showing of the matters contained in them. They are taken from the volume for 1871, because that comes nearest to the time for which our approximation is made.

These extracts from the Massachusetts report will also be valuable as illustrating the uselessness as statistical information, of those comparisons of quoted wages, between this and other countries, so much delighted in by its present management.

These, which are actual returns, show almost the same results as we reach from the census report; inadequate compensation. How nonsensical the boast that higher wages are paid here than in foreign countries. If their workmen were roasted, would it be a source of gratulation to us that ours were only boiled?

MECHANICAL TABLE No. III.—Wages, etc.

Number of blank	BUSINESS.	Number of employees,	Native	Foreign	Men	Young persons	AVERAGE DAY WAGES.									Total amount paid from January 1, to July 1, 1870
							Foreman	Engineer	Laborer	Moulder	Apprentice	Foundry men	Pattern maker	Machinist	Blacksmith	
1..	Agricultural tools	45	18	27								$1 80		$2 00	$2 11	$13,018 00
2..		50	36	14			$4 50	$2 50	$1 75					2 75	3 00	19,002 00
3..		157							1 50		$1 12			2 08	2 50	
4..		288					3 75				1 25			2 25		
5..		75					3 00							2 18		
6..		52	22	27										2 40	2 50	33,920 74
7..	Anchors	107	40	67	93	14					1 06			2 70		37,357 30
8..		11	4	7										3 31	3 25	3,547 15
9..	Boiler makers	15	3	12					1 75					2 00		1,504 67
10..		37	15	22					1 66					2 50		8,742 46
11..		20	7	13										2 37		8,552 66
12..	Brass, bronze and copper	68	38	30										1 73		15,593 31
13..		66	10	56					1 55	1 62		1 75		1 89		18,350 00
14..		275	183	92			4 00				1 00	2 50		3 35		72,000 00
15..		10	7	3	6	4					1 00	3 00				3,432 00
16..		11	10	1	9	2					1 25			2 42		2,765 97
17..		24	5	19										2 05		5,923 16
18..		27	10	17	18	8						2 25		2 25		7,798 21
19..	Foundry and castings	843	115	718	718	66								2 17		540,000 00
20..		15			12	3			1 50	2 50	1 00					2,910 78
21..		76			68	8		2 75	1 08	2 83	1 00		$3 00	2 91	2 00	
22..	Wire goods	65	25	40										1 83		9,488 27
23..		20	18	2										4 62		1,592 66
24..	Foundry	27	18	9					1 60	2 75	1 00		2 75	2 50		7,200 00
25..		14	12	2			3 50			2 75				2 00		21,550 00
26..	Bells	82	37	45	75	7					1 00			2 00		20,301 08
27..	Stove castings	14	11	3					1 75	3 50						3,000 00
28..		50	30	20	46	4	4 50	2 00	1 75	3 90	1 50		2 75	2 81	2 00	

29..	Iron	80	20	60	.....	.....	2 00	2 75	1 62	.....	.....	.....	.....	2 45	.....	20,821 26
30..		34	10	24	.....	.....	.....	2 25	1 70	2 75	.....	.....	.....	2 48	.....	.....
31..		24	13	11	22	2	.....	.....	.....	.....	.....	.....	.....	3 00	.....	11,232 00
32..	Foundry	32	12	20	28	4	8 33	2 25	.....	.....	1 25	.....	.....	3 00	3 37	11,885 31
33..		69	19	30	.....	.....	6 00	2 50	1 50	.....	.....	1 75	.....	2 08	2 25	.....
34..		100	12	18	77	23	.....	.....	1 66	2 25	50	.....	3 00	.....	.....	30,000 00
35..		50	35	15	.....	.....	.....	.....	.....	2 75	.....	.....	.....	.....	.....	20,937 57
36..		121	62	121	.....	.....	4 80	2 75	2 00	3 50	.....	.....	.....	2 75	.....	29,598 00
37..		29	25	4	.....	.....	3 53	2 88	1 45	.....	.....	.....	2 68	3 00	.....	8,000 00
38..		27	25	2	26	1	3 00	.....	1 50	2 50	50	.....	.....	2 75	2 25	6,000 00
39..		148	8	140	.....	.....	3 00	2 00	1 50	.....	.....	1 75	.....	2 75	2 00	.....
40..		30	15	15	.....	.....	2 00	2 00	.....	2 50	.....	.....	2 37	2 12	2 25	.....
41..		80	25	55	.....	.....	.....	.....	.....	1 75	.....	.....	.....	.....	.....	14,500 00
42..		14	13	1	.....	.....	3 00	.....	.....	2 25	.....	.....	.....	1 85	.....	3,557 84
43..		26	6	20	.....	.....	.....	.....	.....	.....	.....	1 80	.....	.....	.....	6,581 89
44..	Forge	12	10	2	.....	.....	.....	.....	.....	.....	.....	2 33	.....	.....	.....	1,586 00
45..	Foundry	31	.....	.....	.....	.....	.....	2 00	.....	2 60	1 17	.....	.....	2 34	.....	9,800 00
46..		55	47	8	.....	.....	3 08	2 25	.....	2 75	1 00	.....	2 75	3 03	3 00	13,686 00
47..		15	9	6	.....	.....	.....	.....	1 68	2 52	.....	.....	.....	2 25	.....	6,468 93
48..		106	83	23	.....	.....	.....	2 50	2 00	4 32	.....	.....	4 00	3 21	.....	44,881 00
49..		187	91	96	.....	.....	.....	.....	1 65	.....	.....	2 25	.....	2 64	.....	57,276 00
50..		19	16	3	14	5	.....	2 50	1 75	2 00	1 00	.....	.....	2 50	.....	.....
51..	Iron works	20	13	7	.....	.....	.....	.....	.....	.....	.....	2 75	.....	.....	.....	8,670 90
52..	Foundry	161	.....	.....	.....	.....	4 60	2 42	.....	2 67	75	2 26	2 84	1 87	2 89	.....
53..		21	11	10	.....	.....	.....	.....	.....	.....	.....	2 00	.....	.....	.....	10,000 00
54..		375	163	212	.....	.....	.....	.....	1 75	2 40	.....	.....	.....	2 00	2 62	46,700 37
55..	Machinery	100	80	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 08	.....	24,800 00
56..		75	50	25	.....	.....	3 50	.....	1 50	2 25	1 25	.....	.....	2 25	.....	28,800 00
57..		548	290	258	.....	.....	4 00	.....	1 54	.....	.....	2 01	.....	2 25	2 37	189,369 36
58..		25	23	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 00	.....	7,500 00
59..		18	6	12	16	2	.....	.....	.....	.....	.....	.....	.....	3 00	.....	11,160 00
60..		275	200	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 75	.....	120,000 00
61..		84	44	40	.....	.....	.....	.....	1 85	.....	.....	2 50	.....	2 50	2 50	24,000 00
62..		632	421	211	537	95	.....	.....	.....	.....	.....	.....	.....	2 43	.....	179,031 73
63..		110	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 75	.....	.....
64..		125	100	25	.....	.....	.....	.....	1 50	.....	.....	.....	3 00	2 37	3 00	38,457 30
65..		60	55	5	41	15	3 25	.....	.....	.....	.....	.....	.....	2 12	3 00	14,195 00
66..		34	26	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 90	.....	818 82
67..		74	26	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 00	.....	21,044 96
68..		41	33	8	37	4	.....	.....	2 21	.....	1 25	.....	.....	2 37	4 50	15,342 00
69..		750	358	.....	.....	.....	7 25	.....	1 39	.....	92	.....	.....	1 80	.....	225,635 00
70..		15	9	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 00	.....	6,699 00
71..		33	12	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 50	.....	7,071 50

MECHANICAL TABLE No. III.—Wages, etc.—*Continued.*

Number of blank.	BUSINESS.	No. of employees.	Native.	Foreign.	Men.	Young persons.	AVERAGE DAY WAGES.									Total amount paid from January 1, to July 1, 1870.
							Foreman.	Engineer.	Laborer.	Moulder.	Apprentice.	Foundry men.	Patternmaker.	Machinist.	Blacksmith.	
72..	Machinery—*Continued*.	96	20	76					$1 65	$2 25				$2 75	$2 50	$17,796 53
73..		60	48	12			$4 80		1 75	2 50	$1 00	$2 75	$3 50	2 75		8,000 00
74..		272	136	136						1 97				1 86		74,343 04
75..		28	20	8					1 50	2 50	1 00		2 75	2 50	2 50	
76..		97		50			4 60		1 23			1 89	2 90	1 24	2 37	20,423 00
77..		20	19	1							1 00			2 50		4,500 00
78..		280	245	35			5 50		1 50	3 25	1 30	3 25	3 37	2 60		108,000 00
79..		32	29	3					1 87				2 50	2 26	2 75	9,101 88
80..		100	81	19										2 41		26,444 59
81..		96	44	52											2 50	21,369 48
82..		44	27	17	34	9		$1 50	1 50	2 75				3 00	2 25	8,062 31
83..		60	45	15										3 00		21,000 00
84..	Cotton gins	71	66	5	69			2 00	1 67			2 25		2 69		
85..	Iron works	70												2 87		23,139 94
86..	Tacks and nails	250	83	167					1 53	2 00				2 25		35,660 99
87..		45	42	3	20	16	2 75	2 00	1 77					2 48		8,734 59
88..		300		300				1 10	1 62	4 50		4 00		2 53	1 75	85,131 42
89..		36	18	18				1 73						2 22	2 50	12,863 26
90..		85	87	98					1 67					2 08	3 50	51,850 79
91..		300	200	100	2 00	20			1 50		1 00			2 87		
92..		50	44	6												7,500 00
93..		75	75		33	35		2 25		2 00	75			2 00	4 00	14,701 00
94..		520							1 53			1 50		2 21		133,617 89
95..		165	145	20	95	30			2 00		75			2 25		
96..	Tin and sheet iron	17			14	3			2 33		1 00				3 00	
97..		138	121	17					1 25					2 31	2 37	30,136 76
		10,716	6,573	3,398	2,300	649										3,056,025 63

Average amount paid per day to each person employed, $2 18.

As a result of these tables we may note that they report $2 18 to be the average daily wages paid each person employed, and reckoned upon the amount paid each person for the six months, $285 18, will show an average of 130 days to have been worked. This is substantially a close corroboration of the correctness of our tables, both as to classification, wages and actual average annual earnings, for included in these returns are all the foremen, who, in our tables, are classed among the full time hands, or those whose time goes on steadily whether business is full or lax, whether machinery is running smoothly or is broken, whether agreement exists between employer and employed, or the work is idle in consequence of contest. Suppose, for the sake of the illustration, we try to present these results in the same form as ours, and see what the result will be. It will be seen that as these returns are made there are only a few of them in which foremen, as such, are named, and their wages given. Yet it is no violent assumption to say that the number of foremen, or persons that we have classified as such, will be one in twenty, or 5 per cent. of the whole.

We will take of the whole number given.......................... 10,716

For Foremen........ 5 per cent. of the men, or.........	503
Skilled workmen, 75 ......do......do..............	7,550
Laborers........ 20 ......do......do..............	2,014
Young persons, the number returned.	649

We propose to pay these several classes at the averages of the rates of wages given as paid to the several classes in the tables. As to our classification, a reference to the returns to this office, from similar industries in this State, will demonstrate how near right or how far wrong we are in that, thus:

Rate per day....	CLASS.	Number.......	Earnings of each class per day...	Earnings of each class for half year.........	Actual avg. earnings for h'f year,
$4 09	Foremen..........................	503	$2,057 27	$268,742 54	$524 2
2 30	Skilled workmen..................	7,550	17,365 00	2,268,404 95	300 4
1 65	Laborers..........................	2,014	3,323 10	434,099 27	215 4
1 00	Youth..............................	649	649 00	84,778 87	130 6
	Total of Mass. tables..................	10,716	23,394 37	3,056,025 63	....

When it is taken into consideration that the trades enumerated in these returns are those in which wages are understood to rule the highest in this country, which is made apparent by the wages quoted alike in the returns received at this office, and in those in the foregoing Massachusetts table, the corroboration they furnish of the substantial correctness of our conclusions is peculiarly and strikingly forcible. Our purpose has been in all we have presented thus far, to show as nearly to demonstration as the data would admit, not only what the average earnings of Pennsylvania workmen are, but what proportion of the whole have adequate means of support, and what proportion are inadequately paid. That the results are disappointing, and to some extent alarming, is the least that can be said of them. It has been so long the prevailing custom to speak of our peculiar social and political structure as developing the most beneficient liberality of compensation to the wage-worker ; so long our standing boast that the American workman is the best paid in the world, and the happiest and most contented ; it has been so customary to regard his expressions of discontent, as the effect of the mischievous interference of blatant demagogues, or as the frolicksome or vicious colt-like kickings and insolence of pampered fatness, that the presentation of the hard but unquestionable fact that there is in the State of Pennsylvania a horde of laborers, constituting an army in numbers greater than that of the Potomac when its ranks were fullest, who live and rear their families, in some way, on an average income of less than four hundred dollars per year, must strike upon the consciousness of the thoughtful publicist with startling effect. It would have been a far pleasanter task to have reached results the reverse of these. But if this inquiry is to accomplish any good it must be made with a view to the development of the truth, however unpalatable it may prove to be. We have noticed before, that upon inquiry being made, the wages that are quoted are always higher than are realized as averages ; and this is true, not because of any purpose to mislead, but because the demand for work is almost always greater than the demand for workmen.

It is not then our purpose in this report to charge upon any class intentional misrepresentation, but simply to present the situation as it is. To illustrate : The very excellent and suggestive essay read before the Philadelphia Social Science association, April 25, 1872, by Mr. Lorin Blodget, one of the most thoughtful and experienced statisticians, and one of clearest and most conscientious *politico-social* writers of our day, quotes the wages paid in that city, as he found them to be upon careful, persistent and industrious personal inquiry. So impressed was he with the apparent sufficiency of the wages, and consequent prosperity of the wage-working class, that he is convinced "that a greater than temporary success has been gained, and something far beyond mere monetary triumphs have been secured." And yet, the failure of one speculative establishment in that city, and that one not engaged in productive enterprise, has proved sufficient to spread the terrors of general bankruptcy over the whole country, lock up the circulating medium of the people, stop for a time the wheels of industrial progress, and throw upon their reserves for support a great proportion of this *pros-*

perous wage-working population. With what result? Within three weeks the presence of privation became painfully manifest; in four, it stalked ghastly and obtrusive upon the streets; within six, the rumblings of a gathering storm springing from the want and desolation of thousands of unemployed wage-workers, warned the thoughtful and philanthropic to prepare to combat the consequences of extreme poverty among the working thousands.

These facts that are patent to the consciousness of every observant citizen, are additional corroborations of the truthfulness of the lesson our tables of approximation teach; which is simply, that in the greed for material success through inexorable competition, that item of cost being the easiest reached, and the most readily reduced, the measure of wages is made "the dead level of starvation prices." In other words, the worker being present, and perhaps too poor to move, just as much is paid, and no more, as will keep him at his work. This, it is apprehended, is not the deliberate and intended work of any man, or class of men, but the vice of the system. The whole force of our social and educational influences being directed to teaching as the one great purpose of life the acquisition of wealth, every personal ambition, every public aspiration has become tinctured and colored with the vice, until no private act is regarded, no legislative policy debated, except in reference to the bearing it may have upon the promotion of pecuniary success.

COMPARATIVE RATES OF WAGES AND HOURS OF LABOR IN MASSACHUSETTS AND FOREIGN COUNTRIES.

The worth, size and importance of things are to be determined largely by comparison. Of course, this rule ought not to apply to conditions of persons with the same positive application ; for that one man is badly abused is no reason for saying another less badly treated is treated well ; yet, to weigh correctly the condition of a class, it seems to us sound judgment to put the facts concerning one, or a branch of one class, in comparison with those connected with another class or branch of the same. We accordingly present, in this fourth part of our report, the matter properly coming under the above title.

The subject of comparative rates of wages in Massachusetts and foreign countries, from the nature of the case, can be presented but in part ; full, so far as it concerns the industries named below, but in part as regards all the industries of the State. The principal data from which we have drawn the rates paid for foreign labor were obtained by the personal investigation and application of the Hon. Edward Young, Chief of the National Bureau of Statistics, Washington, and responsible parties resident in the respective countries working under his instructions. For the purpose of correction or corroboration, we have referred to similar information by H. M. Queen Victoria's consuls, and incorporated by them in reports to their home government.

Some of the figures were furnished us in tabular form ; others were contained in letters. The wages were given by day, week, month, season or year, and oftentimes in foreign money values. To collate and systemize these figures, calculate the weekly wages from them, and present it here in American gold values and also on the basis of the paper dollar ("greenback") of 1872, has been the work of this Bureau. To obtain the desired figures in Massachusetts, for comparison, direct personal investigation was made by agents of this Bureau, who were received with uniform courtesy by employers ; and in but few instances was any objection made to supplying us with such information as we had deemed needful for our purposes. It is worthy of remark, that of many letters sent to employers for similar information, but few secured any reply whatever. After careful collation of our foreign materials, forty branches of employment were selected as being most complete and most likely to have a similarity in technical subdivisions with our own State's corresponding industries. We subjoin a list of the occupations selected for comparison as regards rates of wages and hours of labor :

Agricultural labor,
Blacksmiths,
Breweries,
Bookbinding,
Bakers,
Brickmaking,
Boots and shoes,
Boxmaking,
Boilers and agricultural machines,
Brushmaking,
Bleaching, dyeing and printing,
Building trades,
Clockmaking,
Chemical works,
Cabinetmaking and upholstery,
Coach, carriage and wagon building,
Clothing manufacture,
Carpetmaking,
Corsetmaking,
Cotton manufactures,
Dressmaking,
Envelopemaking,
Glassmaking,
Hat and cap making,
Iron manufactures,
Jute manufactures,
Locomotive engine making,
Watchmaking,
Preserved meats, pickles, etc.,
Printing,
Papermaking,
Ropemaking,
Rubber manufactures,
Ship building,
Safe and lockmaking,
Soap and candles,
Type foundries,
Tanners and curriers,
Tobacco and cigars,
Woolen manufactures.

In many cases where part of the branches of a business, admitted of comparisons and part did not, we have given the latter subdivisions under the heading, "not admitting of comparison ;" though in a general sense we deem such matter has no rightful place in a report of this Bureau, for, in our conception of the law constituting it, facts relative to or comparable with Massachusetts, are the only ones legislatively called for. If we had not been governed by this strict interpretation of the law in this one division, we could have swelled the report to an inordinate size. Information in our possession concerning the iron trade of England ; Krupp's steel works in Essen, Prussia ; the lace trade of Nottingham, England ; the cutlery trades of Sheffield, England ; the silk manufacturers of Lyons, France ; the glove and velvet factories of Germany ; the linen manufactures of Scotland and Ireland, and the marble manufactures of Italy, would have made a volume in itself ; but as these trades have no corresponding status of importance in our own State, we have deemed them inadmissible, however interesting or valuable they might be to the general reader or student of statistics. Besides the matter just summarized as extraneous, there are in possession of the Bureau (obtained without cost) articles upon "The Drink Traffic of Great Britain ;" tables showing the percentage of advance in wages and cost of living in 1873, as compared with 1861, in Stuttgard and the kingdom of Wurtemberg; "Agricultural Labor in England," and a translation of a comprehensive article, written by Prof. Georges Renaud, upon labor and cost of living in Paris since its evacuation by the Germans. We have adopted the plan, in table 1, of giving the highest wage obtained from our returns, whether home or foreign; also the lowest wage found in them, and such intermediate wages as vary materially from the highest and lowest, grading them according to the amount paid. As far as obtained we deem our rates of wages reliable, and present them in tabular form. We are well aware that no table, that no bare statistics can give the relative condition of classes in different counties, for the habits, customs, tastes and modes of living of one differ from those of another, to as great if not greater degree than the wages of the same class; but with the aid of the department of our work on the purchase-power of money, working people in this State can easily ascertain what condition they would be in in another country, and the laborer or artisan of the Old World can, without much labor on his part, determine his position here, should he be inclined to try his fortunes in the New World. Each must make his calculation as to wages and cost of living on the basis of his own desires. For instance, while in all or nearly all the industries we have given, the employee receives here a much larger income than his fellow in Europe, he will find that his rent, clothing and provisions cost him more; he will find, also, that he receives or consumes more, lives in a better way, has more of the comforts and luxuries of life, so that at the end of the year, while he has but little more, if any, surplus than the European, and has worked no harder, if as hard, he is more of a man and occupies a position some grades higher in the scale of civilization, and has that inestimable blessing denied the foreign laborer, especially the English agricultural workingman, the right and privilege to become a land owner.

If the foreign laborer or mechanic should come to this country and continue to live in the same general meagre way that he did in the old country while he received the wages of the new, he would soon find himself with a surplus that would enable him to place his family in a condition that would be the envy of his old shopmates, but by this the real benefit to himself and family probably would not be equal to that gained by a change of his mode of life, with the prospect of less surplus. It is the real moral and physical condition of a man that makes him more or less of a man, not his property surplus, however desirable the surplus might be. We trust the time will speedily come when he can have both elements to his happiness—moral character and property surplus. While this subject, so far as wages are concerned, furnishes no material of legislative contemplation, it does furnish matter of great interest, not only to employees but to the employer. As regards the hours of labor the facts given certainly form a valuable feature as a basis for action in the regulation of labor in our manufacturing establishments.

TABLE I.—COMPARATIVE RATES OF WAGES.

NOTE.—The following abbreviations are made use of in this table: h. w., for highest wage, m. w. for medium wage, and l. w. for lowest wage. The contractions used of names of countries will be found sufficiently explanatory in themselves. The wages given, in all cases, are those of adult males, unless women, youth or children, are particularly designated. The terms, first grade, second grade, &c., refer simply to the amount of wage received, and have no significance as far as ability or workmanlike qualifications are concerned. The first grade is always the highest wage paid; the last grade given in each case denotes the lowest wage paid. The intermediate grades are, in most cases, the results of careful averaging.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold,
Agriculture.		
Laborers, with board, Massachusetts	$6 00	$5 33
Laborers, without board, England—		
Surrey highest wage	5 45	4 84
Do lowest do	3 53	3 14
Do (women,) highest do	1 63	1 45
Do do lowest do	1 36	1 21
Do (children,) highest do	1 36	1 21
Do do lowest do	70	62
Kent highest do	6 81	6 05
Do lowest do	3 53	3 14
Do (women,) highest do	2 44	2 17
Do do lowest do	1 63	1 45
Do (children,) highest do	2 17	1 93
Do do lowest do	81	72
Sussex highest do	5 45	4 84
Do lowest do	2 99	2 66
Do (women,) highest do	1 63	1 45
Do do lowest do	1 36	1 21
Do (children,) highest do	1 66	1 49
Do do lowest do	54	48
Devonshire highest do	4 08	3 63
Do lowest do	2 17	1 93
Do (women,) highest do	1 22	1 08
Do do lowest do	1 08	96
Do (children,) highest do	1 36	1 21
Do do lowest do	41	36
Cornwall highest do	4 08	3 63
Do lowest do	2 99	2 66
Do (women,) highest do	1 22	1 08
Do do lowest do	1 08	96
Do (children,) highest do	1 22	1 08
Do do lowest do	81	72

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872....	Standard gold,
Laborers, without board, England—		
Norfolk....highest..do	$4 89	$4 35
Do....lowest...do	2 44	2 17
Do..(women,)...highest..do	1 36	1 21
Do....do....lowest...do	81	72
Do..(children,)..highest..do	1 36	1 21
Do....do....lowest...do	27	24
Lincoln....highest..do	8 17	7 26
Do....lowest...do	4 89	4 35
Do..(women,)...highest..do	1 63	1 45
Do....do....lowest...do	81	72
Do..(children,)..highest..do	2 17	1 93
Do....do....lowest...do	81	72
Laborers, without board, Wales—		
Merthyr Tydfil....highest wage	4 89	4 35
Do....lowest...do	3 26	2 90
Do..(women,)...highest..do	1 63	1 45
Do....do....lowest...do	1 08	96
Do..(children,)....do	81	72
Crowbridge....highest..do	5 72	5 08
Do....lowest...do	3 53	3 14
Do..(women,)....do	1 63	1 45
Do..(children,)..highest..do	1 90	1 69
Do....do....lowest...do	81	72
Landilsfarve....highest..do	6 53	5 80
Do....lowest...do	2 72	2 42
Do..(women,)...highest..do	1 63	1 45
Do....do....lowest...do	1 08	96
Do..(children,)..highest..do	1 08	96
Do....do....lowest...do	81	72
Conway..(women,)highest..do	1 63	1 45
Do....(children)....do	27	24
Laborers, without board, Ireland—		
Men....highest wage	4 91	4 36
Do....medium do	2 49	2 22
Do....lowest...do	1 15	1 02
Do..(harvest,)..highest..do	5 74	5 10
Do....do....medium do	4 93	4 38
Do....do....lowest...do	3 38	3 00
Women....highest..do	2 45	2 18
Do....lowest...do	1 90	1 69
Laborers, without board, Scotland—		
Shepherds, including gains	5 24	4 66
Stewards....do	4 92	4 37
Hinds, including gains	4 49	3 99
Bondages, (women,) with board	1 46	1 30
food and washing	1 89	1 68
Foresters, without board, Scotland—		
Overseers	5 72	5 08
Hands	4 08	3 63
Laborers, with board, France—		
Men, highest wage	2 96	2 63
Do...medium..do	1 69	1 50
Do...lowest....do	63	56
Women's....do	63	56
Laborers, with board, Germany—		
Women, highest wage	75	67
Do....lowest...do	54	48

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872......	Standard gold,
Laborers, with board, Prussia—		
Men's wages	$2 85	$2 53
Women, highest wage	93	83
Do....lowest...do	56	50
Laborers, with board, Denmark—		
Men, highest wage	1 43	1 27
Do..lowest....do	1 03	92
Laborers, with board, Russia—		
Men, in summer	5 19	4 61
Do....winter	3 12	2 77
Laborers, with board, (hired only by the year,) Switzerland—		
Men, highest wage	3 47	3 08
Do..lowest...do	2 60	2 31
Women, highest wage	1 29	1 15
Do....lowest...do	1 08	96
Laborers, with board, Italy—		
Men, highest wage	3 89	3 46
Do..lowest...do	2 34	2 08
Women's wages	1 17	1 04
Laborers, with board, Tunis, Continent of Africa—		
Men, highest wage	2 34	2 08
Do..lowest...do	1 95	1 73
Women's wages	1 29	1 15
Blacksmiths.		
Massachusetts—		
In city	18 50	16 44
In country	15 00	13 33
England—		
Highest wage	7 90	7 02
Do.....do	6 81	6 05
Lowest...do	5 45	4 84
Ireland—		
Highest wage	8 98	7 99
High.....do	8 44	7 50
Lowest...do	5 72	5 08
Scotland—		
Highest wage	7 62	6 78
Lowest...do	6 81	6 05
Germany—		
Highest wage	6 75	6 00
Medium..do	4 97	4 42
Lowest...do	3 94	3 50
Prussia—		
Highest wage	7 29	6 48
Medium..do	5 07	4 50
Lowest....do	3 94	3 50
France—		
Highest wage	6 01	5 34
Medium..do	5 27	4 68
Lowest....do	2 70	2 40
Marseilles	10 80	9 60
Do	8 10	7 20
Italy—		
Highest wage	5 40	4 80
Medium..do	3 85	3 42
Lowest....do	2 70	2 40

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.		AV'GE WEEKLY WAGES.	
		Standard U. S. paper dollar, of 1872......	Standard gold,
Switzerland—			
Highest wage		$8 10	$7 20
Lowest...do		6 75	6 00
Wages in Austria		8 10	7 20
Do.....Denmark		5 74	5 10
Do.,....Russia		10 80	9 60
Do.....Tunis		4 05	3 60
Massachusetts, (not admitting of comparison,)—			
Horse-shoers, first grade		19 00	16 89
Do........second..do		17 00	15 11
Fitters, first grade		30 00	26 66
Do...second..do		22 00	19 55
Helpers		11 00	9 77
Machine blacksmiths, first grade		30 00	26 66
Do.........do.......second..do		24 00	21 33
Do.........do.......third...do		22 50	19 98
Do.........do.......fourth..do		21 00	18 66
Breweries.			
Wash-house	Massachusetts	12 50	11 11
Do	England	4 62	4 11
Do...... boys	do	1 63	1 45
Wash-floor	Massachusetts	13 00	11 55
Do	England	4 76	4 23
Do	Germany	4 86	4 32
Teamsters	Massachusetts	13 50	12 00
Dray and van men	England	6 26	5 56
Coopers	Massachusetts	18 00	16 00
Do	England	8 98	7 98
Engine drivers	Massachusetts	15 50	13 78
Do	England	7 35	6 53
Watchman	Massachusetts	13 67	12 15
Do	England	7 89	7 01
Carpenters	Massachusetts	18 00	16 00
Do	England	7 08	6 29
Painters	Massachusetts	18 00	16 00
Do	England	7 08	6 29
(Not admitting of comparison,)			
Kettle-room	Massachusetts	12 00	10 67
Malt-house	do	12 00	10 67
Foreman	do	25 00	22 22
Stores, men	England	5 10	4 53
Do.. boys	do	1 22	1 08
Stagemen	do	5 72	5 08
Hoproom, men	do	5 16	4 59
Stablemen	do	5 45	4 84
Coppersmiths	do	11 43	10 16
Millwrights	do	11 43	10 16
Blacksmiths	do	10 89	9 68
Harnessmakers	do	8 17	7 26
Wheelwrights	do	8 71	7 74
Laborers, general	do	5 45	4 84

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold.
Bookbinders.					
Finishers		1st grade	Massachusetts	$26 00	$23 11
Do		2d do	do	22 00	19 55
Do		3d do	do	20 00	17 77
Do		4th do	do	19 00	16 88
Do		1st do	England	10 89	9 68
Do		2d do	do	9 80	8 71
Forwarders,	1st class	1st grade	Massachusetts	24 00	21 33
Do		2d do	do	20 00	17 77
Do		3d do	do	18 00	16 00
Do	1st class		England	9 80	8 71
Do	2d do	1st grade	Massachusetts	18 00	16 00
Do		2d do	do	16 00	14 22
Do		3d do	do	15 00	13 33
Do	2d class		England	9 80	7 74
Stampers	1st class	1st grade	Massachusetts	22 00	19 55
Do		2d do	do	20 00	17 77
Do	1st class		England	8 71	7 74
Do	2d do		Massachusetts	16 00	14 22
Do	2d do		England	8 17	7 26
Folders	females	1st grade	Massachusetts	9 00	8 00
Do	do	2d do	do	7 00	6 22
Do	do	3d do	do	6 00	5 33
Do	do	4th do	do	5 00	4 44
Do	do	1st do	England	3 81	3 39
Do	do	2d do	do	3 24	2 88
Do	do	3d do	do	2 72	2 42
Do	do	piece-work	Massachusetts	10 80	9 60
Do	do	do	do	7 20	6 36
Do	do	do	England	5 45	4 84
Do	do	do	do	3 26	2 90
Sewers	do	1st grade	Massachusetts	9 00	8 00
Do	do	2d do	do	7 00	6 22
Do	do	3d do	do	6 00	5 33
Do	do	4th do	do	5 00	4 44
Do	do	1st do	England	3 81	3 39
Do	do	2d do	do	3 24	2 88
Do	do	3d do	do	2 72	2 42
Do	do	piece-work	Massachusetts	10 80	9 60
Do	do	do	do	7 20	6 36
Do	do	do	England	4 35	3 87
Do	do	do	do	2 72	2 42
Collators	do	1st grade	Massachusetts	9 00	8 00
Do	do	2d do	do	6 00	5 33
Do	do	3d do	do	5 00	4 44
Do	do	piece-work	do	10 80	9 60
Do	do	do	do	7 20	6 36
Do	do	do	England	3 81	3 39
Do	do	do	do	2 99	2 66
Not admitting of comparison.					
Binders		1st grade	England	9 26	8 23
Do		2d do	do	8 72	7 75
Do		3d do	do	7 35	6 53
Do		1st do	Germany	5 67	5 04
Do		2d do	do	5 06	4 50
Do		3d do	do	3 85	3 42
Do		4th do	do	3 24	2 88

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold.
Bakeries.		
Crackerbaking, men.....1st grade.....Massachusetts...	$15 00	$13 33
Do.....do.....2d ..do.....do.....	14 00	12 44
Do.....do.....3d ..do.....do.....	13 00	11 55
Do.....do.....1st ..do.....England.....	8 72	7 75
Do.....do.....2d ..do.....do.....	7 63	6 78
Do.....do.....3d ..do.....do.....	6 54	5 81
Do.....do.....1st ..do.....Scotland.....	8 17	7 26
Do.....do.....2d ..do.....do.....	7 27	6 54
Do.....do.....3d ..do.....do.....	1 90	1 69
Do.....do.....1st ..do.....Germany.....	6 75	6 00
Do.....do.....2d ..do.....do.....	4 73	4 20
Do.....do.....3d ..do.....do.....	4 05	3 60
Do.....do.....4th..do.....do.....	3 24	2 88
Do.....do..with board....1st ..do.....do.....	2 76	2 45
Do.....do.....do.....2d ..do.....do.....	2 34	2 08
Do.....do.....do.....3d ..do.....do.....	1 13	1 00
Do.....boys.....1st ..do.....Massachusetts...	7 50	6 66
Do.....do.....2d ..do.....do.....	6 00	5 33
Do.....girls.....do.....	6 00	5 33
Do.....boys.....1st ..do.....Scotland.....	1 63	1 45
Do.....do.....2d ..do.....do.....	81	72
Girls.....packing.....Scotland.....	2 44	2 17
Do.....do.....do.....	81	72
Breadbaking, men.....1st grade.....Massachusetts...	15 00	13 33
Do.....do.....2d ..do.....do.....	14 50	12 88
Do.....do.....1st ..do.....Scotland.....	8 71	7 74
Do.....do.....2d ..do.....do.....	3 26	2 90
Men, (see crackerbaking).....England.....	.....	.....
Do.....do.....Germany.....	.....	.....
Not admitting of comparison.		
Boys, breadbaking.....Massachusetts...	10 00	8 89
Girls.....do.....do.....	7 10	6 31
Boots and Shoes.		
Cutters, upper.....Massachusetts...	18 00	16 00
Do....with dies.....do.....	14 00	12 44
Do....sole leather.....do.....	18 00	16 00
Do.....1st grade.....England.....	7 08	6 29
Do.....2d ..do.....do.....	6 54	5 81
Do.....3d ..do.....do.....	4 91	4 36
Fitters.....stock.....Massachusetts...	16 00	14 22
Fitters, females.....1st grade.....England.....	7 08	6 29
Do.....do.....2d ..do.....do.....	4 91	4 36
Do.....do.....3d ..do.....do.....	3 26	2 90
Bottomers.....Massachusetts...	18 00	16 00
Finishers.....do.....	18 00	16 00
Do.....1st grade.....England.....	10 89	9 68
Do.....2d ..do.....do.....	5 72	5 08
Do.....3d ..do.....Scotland.....	7 08	6 29
Machine hands, females.....Massachusetts...	10 00	8 89
Do.....do.....Scotland.....	2 72	2 42
Do.....do.....1st grade.....England.....	3 81	3 39
Do.....do.....2d ..do.....do.....	3 24	2 88
Do.....do.....3d ..do.....do.....	2 18	1 94
Lastmakers.....1st grade.....Massachusetts...	20 00	17 78
Do.....2d ..do.....do.....	18 00	16 00

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar in 1872.....	Standard gold,
Boots and Shoes—Continued.				
Last makers	1st grade	England	$8 17	$7 26
Do	2d do	do	5 45	4 84
Shoemakers	1st do	Massachusetts	18 00	16 00
Do	2d do	do	15 00	13 33
Do Repairing	1st do	do	15 00	13 33
Do do	2d do	do	12 00	10 67
Do do	3d do	do	11 00	9 78
Do do	4th do	do	9 00	8 00
Do do	1st do	England	9 53	8 47
Do do	2d do	do	8 57	7 62
Do do	3d do	do	6 94	6 17
Do do	4th do	do	6 27	5 57
Do do	5th do	do	4 91	4 36
Do do	1st do	Germany	6 75	6 00
Do do	2d do	do	6 08	5 40
Do do	3d do	do	4 79	4 26
Do do	4th do	do	3 60	3 20
Do do	5th do	do	2 43	2 16
Do do	1st do	Prussia	4 28	3 80
Do do	2d do	do	3 38	3 00
Do	1st do	France	8 10	7 20
Do	2d do	do	6 75	6 00
Do	3d do	do	4 92	4 38
Do	4th do	do	4 05	3 60
Do	1st do	Italy	3 38	3 00
Do	2d do	do	3 18	2 83
Do	3d do	do	2 63	2 34
Do women		do	1 92	1 71
Do men		Sicily	6 41	5 70
Do	1st do	Denmark	10 13	9 00
Do	2d do	do	6 75	6 00
Do		Austria	6 75	6 00
Do		Switzerland	5 06	4 50
Do		Russia	10 80	9 60
Do		Tunis, Africa	2 50	2 22
Not admitting of comparison.				
Lasters		Massachusetts	16 00	14 22
M'Kay machine men		do	25 00	22 22
Beating-out machines		do	19 00	16 89
Trimmers		do	20 00	17 78
Setting edges		do	20 00	17 78
Heelers		do	20 00	17 78
Lastmaker	3d grade	do	16 00	14 22
Riveters	1st do	England	9 53	8 47
Do	2d do	do	8 17	7 26
Do	3d do	do	5 45	4 84
Do	4th do	do	3 36	2 90
Overlookers	1st do	do	10 89	9 68
Do	2d do	do	8 17	7 26
Riveters		Scotland	6 81	6 05
Shoemakers, (with board,)	1st grade	Germany	2 43	2 16
Do do	2d do	do	1 62	1 44
Do do	3d do	do	1 22	1 08
Do do	4th do	do	92	82

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872	Standard gold,
Brickmaking.		
Moulders ....(with board added,)..1st grade......Massachusetts...	$20 77	$18 46
Do ....do...............2d ..do...........do	9 23	8 24
Do ....do...............3d ..do...........do	8 30	7 38
Do ....no board.........................England	5 94	5 28
Sorters ....1st grade......Massachusetts...	9 00	8 00
Do ....2d ..do...........do	8 30	7 38
Do ....no board.........................England	6 75	6 00
Loaders ....1st grade......Massachusetts...	9 00	8 00
Do ....2d ..do...........do	8 30	7 38
Do ....no board.........................England	6 75	6 00
Barrowmen ....1st grade......Massachusetts ...	12 00	10 67
Do ....2d ..do...........do	9 00	8 00
Do ....3d ..do...........do	8 76	7 79
Do ....1st ..do.......England	5 67	5 04
Do ....2d ..do...........do	4 86	4 32
Carpenters ....1st..do.......Massachusetts...	18 00	16 00
Do ....2d ..do...........do	13 85	12 31
Do ....no board.........................England	6 48	5 76
Engineers ....1st ..do.......Massachusetts...	22 50	20 00
Do ....2d ..do...........do..	19 23	17 09
Do ....3d ..do...........do..	12 00	10 67
Do ....no board.........................England	9 72	8 64
Not admitting of comparison.		
Overseers ....Massachusetts ...	15 00	13 33
Blacksmiths ....do	14 50	12 89
Laborers ....1st grade.........do	13 50	12 00
Do ....2d ..do...........do	8 65	7 69
Do ....3d ..do...........do	8 07	7 17
Do ....4th..do...........do	7 61	6 76
Burners ....1st grade.........do	34 61	30 76
Do ....2d ..do...........do	30 00	26 67
Do ....3d ..do...........do	16 15	14 36
Do ....4th..do...........do	15 00	13 33
Pressers ....do	11 30	10 04
Face-brick men ....do	11 30	10 04
Teamsters ....1st grade.........do	10 36	9 21
Do ....2d ..do...........do	7 16	6 36
Hostlers ....1st grade.........do	10 36	9 21
Do ....2d ..do...........do	7 16	6 36
Cooks ....do	8 07	7 17
Boys ....1st grade.........do	7 61	6 76
Do ....2d ..do...........do	5 77	5 13
Box Making. Fancy and paper boxes.		
Men ....1st grade......Massachusetts ...	18 00	16 00
Do ....2d ..do...........do	15 00	13 33
Do ....3d ..do...........do	12 00	10 67
Do ....1st..do.......England	10 89	9 68
Do ....2d ..do...........do	4 91	4 36
Do ....3d ..do...........do	3 26	2 90
Do ....Germany	4 86	4 32
Boys ....Massachusetts . .	5 37	4 77
Do ....England	2 18	1 94
Women and girls ....1st grade......Massachusetts ...	7 50	6 67
Do ....do...................2d ..do...........do	6 00	5 33

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872......	Standard gold,
Boxmaking—Continued.				
Women and girls	3d grade	Massachusetts	$5 00	$4 44
Do		Germany	3 24	2 88
Brushmaking.				
Pan hands....females	1st grade	Massachusetts	8 00	7 11
Do	2d ..do	do	7 00	6 22
Do	3d ..do	do	6 00	5 33
Do		England	8 17	7 26
Borers	1st..do	Massachusetts	19 00	16 89
Do	2d ..do	do	18 00	16 00
Do	3d ..do	do	15 00	13 33
Do	4th..do	do	14 00	12 44
Do		England	8 16	7 26
Combers	1st..do	Massachusetts	18 00	16 00
Do	2d ..do	do	16 00	14 22
Do	3d ..do	do	15 00	13 33
Do	1st..do	England	9 53	8 47
Do	2d ..do	do	6 81	6 05
Paint brush makers		Massachusetts	20 00	17 78
Do......do	1st..do	England	12 25	10 89
Do......do	2d..do	do	10 89	9 68
Finishers	1st..do	Massachusetts	20 00	17 78
Do	2d ..do	do	18 00	16 00
Do		England	7 63	6 78
Boys,		Massachusetts	5 00	4 44
Do		England	1 22	1 08
Not admitting of comparison.				
Drawers........females	1st grade	Massachusetts	7 00	6 22
Do..............do	2d ..do	do	6 00	5 33
Do..............do	3d ..do	do	5 00	4 44
Do..............do	4th..do	do	4 00	356
Nailers	1st..do	do	18 00	16 00
Do	2d ..do	do	17 00	15 11
Painters		do	20 00	17 78
Girls	1st..do	England	1 90	1 69
Do	2d ..do	do	1 09	97
Apprentices		do	2 45	2 18
Women	1st..do	do	4 91	4 36
Do	2d ..do	do	2 45	2 18
Bleaching, dyeing and printing.				
Bleaching, singeing, &c.—				
Overseer		Massachusetts	18 00	16 00
Do	1st grade	England	9 53	8 47
Do	2d ..do	do	8 17	7 26
Laborers		Massachusetts	9 00	8 00
Do	1st grade	England	5 72	5 08
Do	2d ..do	do	4 35	3 87
Boys and girls, (13 to 18,)		Massachusetts	3 72	3 31
Do......do	1st grade	England	2 17	1 93
Do......do	2d ..do	do	1 50	1 33
Color mixing—				
Overseer		Massachusetts	21 00	18 67
Do	1st grade	England	16 34	14 52
Do	2d ..do	do	12 25	10 89
Do	3d ..do	do	10 89	9 68

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEELLY WAGES.	
			Standard U.S. paper dollar of 1872......	Standard gold.
Bleaching, dyeing and printing.—Continued.				
Men		Massachusetts	$9 00	$8 00
Do		England	4 89	4 35
Boys, (13 to 18,)		Massachusetts	3 72	3 31
Do	1st grade	England	3 80	3 38
Do	2d do	do	2 72	2 42
Machine printing—				
Overseer		Massachusetts	36 00	32 00
Do		England	14 97	13 31
Printers		Massachusetts	24 00	21 33
Do	1st grade	England	13 61	12 10
Do	2d do	do	12 79	11 37
Do	3d do	do	8 16	7 26
Back-tenters		Massachusetts	7 98	7 09
Do		England	4 35	3 87
Boys, (13 to 18,)		Massachusetts	3 72	3 31
Do	1st grade	England	2 17	1 93
Do	2d do	do	1 36	1 21
Dyeing and steaming—				
Overseer		Massachusetts	21 00	18 67
Do	1st grade	England,	8 16	7 26
Do	2d do	do	5 45	4 84
Men		Massachusetts	9 00	8 00
Do		England	4 35	3 87
Boys and girls, (13 to 18,)		Massachusetts	3 72	3 31
Do	1st grade	England	4 89	4 35
Do	2d do	do	2 17	1 93
Dyeing, soaping, cleaning—				
Overseer		Massachusetts	21 00	18 67
Do	1st grade	England	16 25	14 52
Do	2d do	do	9 53	8 47
Dyers		Massachusetts	9 00	8 00
Do	1st grade	England	5 72	5 08
Do	2d do	do	5 45	4 84
Do	3d do	do	4 62	4 11
Do	4th do	do	4 35	3 87
Do	1st do	Germany	4 73	4 20
Do	2d do	do	4 05	3 60
Do	3d do	do	3 44	3 06
Do	4th do	do	3 24	2 88
Finishing, Making up and Packing.				
Overseers		Massachusetts	18 00	16 00
Men		do	15 00	13 33
Do	1st grade	England	5 72	5 08
Do	2d do	do	4 89	4 35
Women		Massachusetts	4 50	4 00
Do	1st grade	England	3 53	3 14
Do	2d do	do	2 31	2 05
Boys and girls		Massachusetts	3 72	3 31
Do	1st grade	England	2 44	2 17
Do	2d do	do	1 36	1 21
Repairs.				
Overseer		Massachusetts	28 50	25 33

RATE OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872	Standard gold.
Repairs—Continued.				
Overseers		England	$13 61	$12 10
Machinists		Massachusetts	16 50	14 67
Do	1st grade	England	8 70	7 74
Do	2d do	do	8 17	7 26
Carpenters		Massachusetts	15 00	13 33
Do	1st grade	England	8 70	7 74
Do	2d do	do	5 16	4 59
Engine tenders		Massachusetts	13 50	12 00
Do do		England	5 45	4 84
Watchmen		Massachusetts	13 50	12 00
Do		England	5 72	5 08
Carters		Massachusetts	12 00	10 67
Do	1st grade	England	5 45	4 84
D	2d do	do	4 89	4 35
Clerks (in office)		Massachusetts	12 00	10 67
Do do		England	10 07	8 95
Do do		do	8 17	7 26
Designers		Massachusetts	30 00	26 67
Do	1st grade	England	16 34	14 52
Do	2d do	do	10 89	9 68
Engravers		Massachusetts	24 00	21 33
Do	1st grade	England	13 61	12 10
Do	2d do	do	8 17	7 26
Not admitting of comparison.				
Woman (above 18)		do	2 58	2 29
Do do		do	2 44	2 17
BUILDING TRADES—*Masons.*				
Masons		Massachusetts	24 00	21 33
Do	1st grade	England	10 17	9 04
Do	2d do	do	9 53	8 47
Do	3d do	do	8 85	7 87
Do	4th do	do	8 17	7 26
Do	1st do	Scotland	9 53	8 47
Do	2d do	do	8 58	7 63
Do	3d do	do	7 90	7 02
Do		Ireland	7 63	6 78
Do stone		Germany	13 84	12 30
Do	1st grade	do	9 42	8 37
Do	2d do	do	8 10	7 20
Do	3d do	do	7 02	6 24
Do	4th do	do	5 64	5 01
Do	5th do	do	4 86	4 32
Do	1st do	Prussia	4 50	4 00
Do	2d do	do	4 10	3 64
Do	3d do	do	3 69	3 28
Do	1st do	France	7 43	6 60
Do	2d do	do	5 91	5 25
Do	3d do	do	5 13	4 56
Do	1st do	Italy	3 21	2 85
Do	2d do	do	2 63	2 34
Do	1st do	Switzerland	6 75	6 00
Do	2d do	do	5 40	4 80
Do		Russia	10 80	9 60
Do		Austria	6 75	6 00
Do		Denmark	5 40	4 80
Do		Tunis, Africa	4 05	3 60

RATE OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1873	Standard gold.
Bricklayers.				
Bricklayers		Massachusetts	$24 00	$21 33
Do	1st grade	England	10 17	9 04
Do	2d do	do	9 80	8 71
Do	3d do	do	9 26	8 23
Do	4th do	do	8 17	7 26
Do	1st do	Ireland	8 99	7 99
Do	2d do	do	5 72	5 08
Do	1st do	Germany	5 94	5 28
Do	2d do	do	4 11	3 65
Do	3d do	do	3 71	3 30
Do (contract)		Prussia	11 25	10 00
Do do		do	9 00	8 00
Do	1st do	do	8 91	7 92
Do	2d do	do	7 29	6 48
Do	3d do	do	6 19	5 50
Do	1st do	Switzerland	8 10	7 20
Do	2d do	do	6 75	6 00
Do	3d do	do	6 08	5 40
Do	1st do	France	6 75	6 00
Do	2d do	do	5 40	4 80
Do	3d do	do	3 38	3 00
Do		Russia	10 80	9 60
Do	1st grade	Italy	6 08	5 40
Do	2d do	do	2 70	2 40
Do		Tunis	4 05	3 60
Plasterers.				
Plasters		Massachusetts	24 00	21 33
Do	1st grade	England	10 17	9 04
Do	2d do	do	8 62	7 66
Do	3d do	do	7 08	6 29
Do	4th do	do	6 27	5 57
Do	1st do	Scotland	8 10	7 20
Do	2d do	do	7 21	6 41
Do	3d do	do	6 81	6 05
Do	4th do	do	6 54	5 81
Do	1st do	Ireland	9 80	8 71
Do	2d do	do	7 63	6 78
Do	3d do	do	6 54	5 81
Do	1st do	Germany	9 72	8 64
Do	2d do	do	8 91	7 92
Do	3d do	do	7 29	6 48
Do	4th do	do	6 48	5 76
Do	5th do	do	5 04	4 48
Do	6th do	do	3 71	3 30
Do	1st do	Prussia	17 01	15 12
Do	2d do	do	12 15	10 80
Do	3d do	do	11 25	10 00
Do	4th do	do	9 00	8 00
Do	5th do	do	6 19	5 50
Do	1st do	France	9 45	8 40
Do	2d do	do	6 75	6 00
Do	3d do	do	6 21	5 52
Do	4th do	do	4 05	3 60
Do	1st do	Switzerland	8 10	7 20
Do	2d do	do	6 75	6 00
Do	1st do	Italy	6 08	5 40

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold.
Plasterers—Continued.				
Plasterers	2d grade	Italy	$3 85	$3 42
Do		Austria	6 75	6 00
Do		Denmark	5 40	4 80
Do		Russia	10 80	9 60
Do		Tunis, Africa	3 38	3 00
Laborers.				
Laborers	1st grade	Massachusetts	14 00	12 44
Do	2d do	do	13 50	12 00
Do	1st do	England	6 67	5 93
Do	2d do	do	6 02	5 35
Do	3d do	do	5 42	4 82
Do	4th do	do	4 77	4 24
Do	5th do	do	4 08	3 63
Do	1st do	Scotland	5 49	4 88
Do	2d do	do	4 62	4 11
Do	1st do	Germany	3 42	3 04
Do	2d do	do	3 24	2 88
Hodmen	1st do	do	8 10	7 20
Do	2d do	do	6 75	6 00
Do	3d do	do	4 39	3 90
Do		Prussia	6 48	5 76
Laborers	1st do	Ireland	4 91	4 36
Do	2d do	do	3 24	2 88
Do	3d do	do	2 45	2 18
Do	1st do	France	2 84	2 52
Do	2d do	do	1 35	1 20
Do		Prussia	4 05	3 60
Do		Denmark	4 05	3 60
Do		Italy	2 03	1 80
Do		Tunis, Africa	2 70	2 40
Carpenters.				
Carpenters	1st grade	Massachusetts	18 00	16 00
Do	2d do	do	15 00	13 33
Do	1st do	England	10 17	9 04
Do	2d do	do	9 45	8 40
Do	3d do	do	8 53	7 58
Do	4th do	do	7 39	6 57
Do	5th do	do	7 08	6 29
Do	1st do	Scotland	7 63	6 78
Do	2d do	do	6 94	6 17
Do	3d do	do	6 54	5 81
Do	1st do	Ireland	8 99	7 99
Do	2d do	do	7 08	6 29
Do	3d do	do	4 91	4 36
Do	1st do	Germany	9 25	8 22
Do	2d do	do	8 51	7 56
Do	3d do	do	7 13	6 34
Do	4th do	do	6 08	5 40
Do	5th do	do	5 10	4 53
Do	6th do	do	4 15	3 69
Do	(contract)	Prussia	11 25	10 00
Do	do	do	9 00	8 00
Do	1st grade	do	7 29	6 48
Do	2d do	do	6 19	5 50
Do	3d do	do	4 50	4 00

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.	Standard gold.
Carpenters—Continued.				
Carpenters	4th grade	Prussia	$4 10	$3 64
Do	5th. .do	do	3 69	3 28
Do	1st. .do	France	13 50	12 00
Do	2d . .do	do	9 45	8 40
Do	3d . .do	do	8 10	7 20
Do	4th. .do	do	6 75	6 00
Do	5th. .do	do	5 13	4 56
Do	6th. .do	do	4 05	3 60
Do	1st. .do	Switzerland	8 10	7 20
Do	2d . .do	do	6 75	6 00
Do	3d . .do	do	5 74	5 10
Do	4th. .do	do	5 40	4 80
Do	1st. .do	Italy	6 75	6 00
Do	2d . .do	do	3 30	2 93
Do	3d . .do	do	2 63	2 34
Do		Russia	10 80	9 60
Do		Austria	8 10	7 20
Do		Denmark	5 40	4 80
Do		Tunis, Africa	4 05	3 60
Plumbers.				
Plumbers		Massachusetts	16 00	14 22
Do . . . . . boys		do	7 00	6 22
Do	1st grade	England	9 79	8 71
Do	2d . .do	do	8 99	7 99
Do	3d . .do	do	8 17	7 26
Do	4th. .do	do	7 44	6 61
Do	1st. .do	Scotland	8 17	7 26
Do	2d . .do	do	7 63	6 78
Do . . . . . boys		do	82	73
Do		Germany	4 86	4 32
Slaters.				
Slaters		Massachusetts	18 00	16 00
Do	1st grade	England	8 17	7 26
Do	2d . .do	do	7 62	6 77
Do	1st. .do	Germany	8 10	7 20
Do	2d . .do	do	6 75	6 00
Painters.				
Painters	1st grade	Massachusetts	17 00	15 11
Do	2d . .do	do	16 50	14 66
Do	3d . .do	do	13 50	12 00
Do	1st. .do	England	9 79	8 71
Do	2d . .do	do	9 41	8 36
Do	3d . .do	do	8 63	7 67
Do	4th. .do	do	7 63	6 78
Do	5th. .do	do	6 27	5 57
Do	1st. .do	Scotland	7 50	6 67
Do	2d . .do	do	6 94	6 17
Do	1st. .do	Ireland	10 62	9 44
Do	2d . .do	do	7 35	6 53
Do	3d . .do	do	6 81	6 05
Do	1st. .do	Germany	12 15	10 80
Do	2d . .do	do	10 60	9 42
Do	3d . .do	do	9 45	8 40
Do	4th. .do	do	7 29	6 48

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold,
Painters—Continued.				
Painters	5th grade	Germany	$6 08	$5 40
Do	6th..do	do	4 73	4 20
Do	7th..do	do	3 71	3 30
Do (contract)		Prussia	11 25	10 00
Do do		do	9 00	8 00
Do	1st..do	do	6 19	5 50
Do	2d ..do	do	5 67	5 04
Do	1st..do	France	6 75	6 00
Do	2d ..do	do	6 08	5 40
Do	3d ..do	do	5 06	4 50
Do	4th..do	do	3 85	3 42
Do	1st..do	Italy	6 75	6 00
Do	2d ..do	do	3 95	3 51
Do	3d ..do	do	2 63	2 34
Do	1st..do	Switzerland	6 75	6 00
Do	2d ..do	do	5 40	4 80
Do		Austria	10 13	9 00
Do		Russia	10 80	9 60
Do		Denmark	5 40	4 80
Do		Tunis, Africa	5 06	4 50
Glaziers.				
Glaziers		Massachusetts	16 50	14 66
Do		England	7 44	6 61
Do	1st grade	Germany	6 75	6 00
Do	2d ..do	do	4 73	4 20
Do	3d ..do	do	4 05	3 60
Gas Fitters.				
Gas fitters	1st grade	Massachusetts	27 00	24 00
Do	2d ..do	do	21 00	18 66
Do	3d ..do	do	18 00	16 00
Do	1st..do	Scotland	6 81	6 05
Do	2d ..do	do	6 54	5 81
Do	1st..do	Germany	8 10	7 20
Do	2d ..do	do	4 86	4 32
Paper Hangers.				
Paper hangers	1st grade	Massachusetts	23 08	20 52
Do	2d ..do	do	15 38	13 67
Do	3d ..do	do	11 54	10 26
Do	1st..do	Germany	8 10	7 20
Do	2d ..do	do	5 54	4 92
Do	3d ..do	do	4 05	3 50
Do	4th..do	do	3 24	2 88
Roofers—(Not admitting of comparison.)				
Tin and metallic		Massachusetts	19 50	17 33
Composition		do	15 00	13 33
Boilers and Agricultural Machines.				
Boilermen		Massachusetts	14 44	12 83
Do	1st grade	England	12 25	10 89
Do	2d ..do	do	10 35	9 20
Do	3d ..do	do	9 80	8 71
Do	4th..do	do	8 99	7 99
Do	5th..do	do	7 66	6 72

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872......	Standard gold,
Boilers and Agricultural Machines—Continued.				
Boilermen	1st grade	Scotland	$9 26	$8 23
Do	2d do	do	8 44	7 50
Do	3d do	do	5 72	5 08
Do	1st do	Prussia	11 34	10 08
Do	2d do	do	8 10	7 20
Blacksmiths	1st grade	Massachusetts	18 00	16 00
Do	2d do	do	14 40	12 80
Do	1st do	England	11 43	10 16
Do	2d do	do	8 44	7 50
Do	3d do	do	7 18	6 38
Do	4th do	do	6 53	5 80
Do	1st do	Scotland	7 62	6 77
Do	2d do	do	5 99	5 32
Do		Prussia	12 15	10 80
Do		Austria	84	75
Strikers		Massachusetts	10 50	9 30
Do		England	5 45	4 84
Engineer and fireman		Massachusetts	9 00	7 98
Do do	1st grade	Germany	12 47	11 08
Do do	2d do	do	10 38	9 23
Do do	3d do	do	8 30	7 38
Do do	4th do	do	7 27	6 46
Do do	5th do	do	6 23	5 54
Do		Prussia	16 20	14 40
Lathe hands	1st grade	Massachusetts	16 50	14 64
Do	2d do	do	10 50	9 30
Do		England	8 71	7 74
Do	1st grade	Prussia	7 29	6 48
Do	2d do	do	6 48	5 76
Do	1st do	Germany	7 20	6 40
Do	2d do	do	3 60	3 20
Apprentices		Massachusetts	4 50	4 02
Do		Prussia	2 43	2 16
Machinists	1st grade	Massachusetts	21 00	18 66
Do	2d do	do	19 50	17 33
Do	3d do	do	18 00	16 00
Do	4th do	do	13 50	12 00
Do	1st do	England	10 80	9 60
Do	2d do	do	7 35	6 53
Do	1st do	Ireland	12 25	10 89
Do	2d do	do	8 17	7 26
Do	1st do	Germany	6 75	6 00
Do	2d do	do	4 95	4 40
Do	3d do	do	3 71	3 30
Do	1st do	Prussia	12 15	10 80
Do	2d do	do	8 90	7 92
Do	3d do	do	7 29	6 48
Do	4th do	do	6 48	5 76
Do	5th do	do	4 86	4 32
Do	1st do	France	6 75	6 00
Do	2d do	do	6 01	5 34
Do	3d do	do	3 74	3 32
Do	4th do	do	2 57	2 28
Do	1st do	Switzerland	10 13	9 00
Do	2d do	do	7 09	6 30
Do	3d do	do	5 40	4 80
Do	4th do	do	4 05	3 60

RATES OF WAGES.—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U.S. paper dollar of 1872......	Standard gold,
Machinists	1st grade	Sicily, Italy	$8 10	$7 20
Do	2d do	do	4 05	3 60
Do		Austria	3 12	2 77
Do		Tunis, Africa	5 06	4 50
Do	1st grade	Russia	13 50	12 00
Do	2d do	do	11 81	10 50
Iron moulders		Massachusetts	14 40	12 80
Do	1st grade	England	9 79	8 70
Do	2d do	do	8 71	7 74
Do	3d do	do	7 62	6 77
Do	4th do	do	7 08	6 29
Do (contract,)		Germany	7 20	6 40
Do	1st grade	do	6 75	6 00
Do	2d do	do	4 73	4 20
Do	3d do	do	3 60	3 20
Do		Prussia	9 72	8 64
Do		Austria	1 07	95
Painters		Massachusetts	12 00	10 67
Do	1st grade	England	5 99	5 32
Do	2d do	do	4 89	4 35
Patternmakers	1st do	Massachusetts	15 00	13 33
Do	2d do	do	13 50	12 00
Do	1st do	England	10 07	8 95
Do	2d do	do	9 53	8 47
Do	3d do	do	7 62	6 77
Do	1st do	Scotland	8 17	7 26
Do	2d do	do	7 08	6 29
Do	1st do	Prussia	8 10	7 20
Do	2d do	do	4 86	4 32
Not admitting of comparison.				
Agricultural machinery, overseers		Massachusetts	18 00	16 00
Mining machinery		do	18 00	16 00
Chippers		do	9 00	7 98
Filers		do	9 00	7 98
Engine fitters	1st grade	England	10 89	9 68
Do	2d do	do	9 26	8 23
Do	3d do	do	8 71	7 74
Do	4th do	do	6 81	6 05
Do	5th do	do	6 53	5 80
Do	1st do	Scotland	7 35	6 53
Do	2d do	do	6 53	5 80
Do	1st do	Prussia	7 29	6 48
Do	2d do	do	6 48	5 76
Laborers	1st do	do	4 91	4 36
Do	2d do	do	3 95	3 51
Do	3d do	do	3 26	2 90
Do	1st do	Scotland	4 35	3 87
Do	2d do	do	4 08	3 63
Do		Prussia	4 86	4 32
Planners		England	8 17	7 26
Hammermen	1st grade	do	4 89	4 35
Do	2d do	do	3 81	3 39
Do		Scotland	4 62	4 11
Do		Austria	1 03	93
Riveters		England	9 26	8 23
Do		Prussia	10 53	9 36
Moulders		England	9 26	8 23

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold,
Clockmaking.				
Clockmakers	1st grade	Massachusetts	$20 00	$18 67
Do	2d do	do	10 00	8 89
Do	1st do	England	10 89	9 68
Do	2d do	do	8 17	7 26
Do	3d do	do	7 62	6 77
Do	4th do	do	6 81	6 05
Chemical works.				
Sulphuric acid makers		Massachusetts	12 00	10 67
Do do		England	7 35	6 53
Reverberatory furnace		Massachusetts	12 00	10 67
Do do		England	7 08	6 29
Laborers		Massachusetts	11 00	9 78
Do	1st grade	England	4 89	4 35
Do	2d do	do	4 08	3 63
Bricklayers		Massachusetts	24 00	21 33
Do	1st do	England	7 08	6 29
Do	2d do	do	6 66	5 92
Joiners		Massachusetts	15 00	13 33
Do	1st do	England	7 48	6 65
Do	2d do	do	6 81	6 05
Furnacemen		Massachusetts	12 00	10 67
Do		England	6 81	6 05
Engineers	1st grade	Massachusetts	12 50	11 11
Do	2d do	do	12 00	10 67
Do		England	7 08	6 29
Plumbers		Massachusetts	15 00	13 33
Do		England	6 66	5 92
Masons		Massachusetts	24 00	21 33
Do		England	8 17	7 26
Not admitted of comparison.				
Workmen	1st grade	England	8 71	7 74
Do	2d do	do	7 48	6 65
Do		Germany	3 11	2 76
Do		Austria	3 24	2 88
Chloride limemakers		England	7 08	6 29
Millwrights		do	7 08	6 29
Cartmen		do	5 23	4 65
Reelmen		do	6 81	6 05
Coopers		do	6 67	5 93
Sawyers		do	5 99	5 32
Brickmakers		do	5 45	4 84
Boilermakers		do	6 81	6 05
Blacksmiths		do	5 99	5 32
Founders, (moulders,)		do	8 01	7 13
Cabinetmaking and Upholstery.				
Cabinetmakers	1st grade	Massachusetts	19 50	17 33
Do	2d do	do	18 00	16 00
Do	3d do	do	16 00	14 22
Do	4th do	do	15 00	13 33
Do	5th do	do	14 00	12 44
Do	1st do	England	12 25	10 89
Do	2d do	do	9 25	8 22
Do	3d do	do	8 44	7 50
Do	4th do	do	5 45	4 84

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold,
Cabinetmaking and Upholstery—Continued.		
Cabinetmaking..........1st..do........Ireland..........	$8 17	$7 26
Do..........2d..do..........do..........	7 08	6 29
Do..........3d..do..........do..........	6 54	5 81
Do..........1st..do........Germany........	5 67	5 04
Do..........2d..do..........do..........	4 86	4 32
Do..........3d..do..........do..........	4 05	3 60
Do..........4th..do..........do..........	3 24	2 88
Do..........1st..do........Prussia..........	12 15	10 80
Do..........2d..do..........do..........	9 72	8 64
Do..........3d..do..........do..........	5 67	5 04
Do..........4th..do..........do..........	4 05	3 60
Do..........1st..do........Austria..........	13 50	12 00
Do..........2d..do..........do..........	6 75	6 00
Do..........1st..do........France..........	6 75	6 00
Do..........2d..do..........do..........	5 40	4 80
Do..........3d..do..........do..........	2 70	2 40
Do..........1st..do........Switzerland.....	6 75	6 00
Do..........2d..do..........do..........	5 74	5 10
Do..........3d..do..........do..........	5 40	4 80
Do..........1st..do........Italy..........	6 08	5 40
Do..........2d..do..........do..........	3 38	3 00
Do..........1st..do........Russia..........	8 78	7 80
Do..........2d : do..........do..........	8 44	7 50
Do..........Denmark........	5 74	5 10
Upholsters..........1st..do........Massachusetts...	18 00	16 00
Do..........2d..do..........do..........	15 00	13 33
Do..........1st..do........England....:....	13 61	12 10
Do..........2d..do..........do..........	9 26	8 23
Do..........3d..do..........do..........	8 17	7 26
Do..........1st..do........Germany........	8 10	7 20
Do..........2d..do..........do..........	5 40	4 80
French polishers or finishers........1st..do........Massachusetts...	14 00	12 44
Do..........2d..do..........do..........	13 80	12 27
Do..........3d..do..........do..........	13 00	11 56
Do..........4th..do..........do..........	12 00	10 67
Do..........5th..do..........do..........	11 00	9 78
Do..........1st..do........England..........	9 26	8 23
Do..........2d..do..........do..........	8 17	7 26
Do..........3d..do..........do..........	7 62	6 77
Painters..........Massachusetts...	14 50	12 89
Do..........England..........	9 45	8 40
Gilders..........Massachusetts...	19 50	17 33
Do..........1st grade......England..........	9 53	8 47
Do..........2d..do..........do..........	8 71	7 74
Do..........3d..do..........do..........	8 17	7 26
Upholstery sewers, female..........1st..do........Massachusetts...	7 50	6 67
Do..........do..........2d..do..........do..........	7 00	6 22
Do..........do..........3d..do..........do..........	6 00	5 33
Do..........do..........1st..do........England..........	3 80	3 38
Do..........do..........2d..do..........do..........	3 26	3 90
Carvers..........1st..do........Massachusetts...	19 00	16 89
Do..........2d..do..........do..........	18 00	16 00
Do..........3d..do..........do..........	17 00	15 11
Do..........1st..do........England..........	13 61	12 10
Do..........2d..do..........do..........	8 17	7 26
Decorators..........Massachusetts...	25 00	22 22
Do..........England..........	10 34	9 19

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold,
Cabinetmaking and Upholstery—Continued.				
Turners		Massachusetts	$17 00	$15 11
Do	1st grade	England	12 25	10 89
Do	2d do	do	8 17	7 26
Chairmakers		Massachusetts	13 00	11 56
Do	1st grade	England	13 61	12 10
Do	2d do	do	8 17	7 26
Not admitting of comparsion.				
Millmen		Massachusetts	14 00	12 44
Joiners		England	10 34	9 19
Coach, Carriage and Wagon Building.				
Bodymakers		Massachusetts	22 00	19 55
Do	1st grade	England	10 89	9 68
Do	2d do	do	7 63	6 78
Do		Germany	6 18	5 49
Carriagemakers	1st grade	Massachusetts	22 00	19 55
Do	2d do	do	19 00	16 88
Do	3d do	do	18 00	16 00
Do	1st do	England	9 80	8 71
Do	2d do	do	8 17	7 26
Do	3d do	do	7 63	6 78
Do	1st do	Germany	4 86	4 32
Do	2d do	do	4 05	3 60
Painters	1st grade	Massachusetts	21 00	18 67
Do	2d do	do	18 00	16 00
Do	1st do	England	9 26	8 23
Do	2d do	do	7 63	6 78
Do		Germany	4 86	4 32
Blacksmiths	1st grade	Massachusetts	21 00	18 67
Do	2d do	do	18 00	16 00
Do	3d do	do	15 00	13 33
Do	1st do	England	10 89	9 68
Do	2d do	do	8 17	7 26
Do		Germany	4 42	3 93
Helpers		Massachusetts	14 00	12 44
Do		England	4 35	3 87
Trimmers	1st do	Massachusetts	22 00	19 55
Do	2d do	do	20 00	17 78
Do	3d do	do	18 00	16 00
Do		Germany	7 29	6 48
Wheelwrights	1st do	Massachusetts	24 00	21 33
Do	2d do	do	21 00	18 66
Do	3d do	do	15 00	13 33
Do	1st do	England	10 89	9 68
Do	2d do	do	7 63	6 78
Do	3d do	do	7 08	6 29
Do	1st do	Ireland	7 63	6 78
Do	2d do	do	7 08	6 29
Do	3d do	do	6 54	5 81
Do	4th do	do	4 91	4 36
Do	1st do	Germany	5 54	4 92
Do	2d do	do	5 06	4 50
Do	3d do	do	4 05	3 60
Do	1st do	Prussia	8 10	7 20
Do	2d do	do	6 48	5 76
Do	1st do	France	6 01	5 34

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold.
Coach, Carriage and Wagon Building—Continued.					
Wheelwrights		2d grade	France	$5 57	$4 95
Do		3d do	do	2 70	2 40
Do		1st do	Switzerland	6 75	6 00
Do		2d do	do	5 40	4 80
Do		3d do	do	5 06	4 50
Do		1st do	Russia	7 56	6 72
Do		2d do	do	6 75	6 00
Do			Austria	6 75	6 00
Do			Denmark	5 74	5 10
Do			Italy	4 05	3 60
Do			Tunis, Africa	4 05	3 60
Not admitting of comparison.					
Piecemen		1st grade	England	7 08	6 29
Do		2d do	do	6 54	5 81
Do	women	1st do	do	2 72	2 42
Do	do	2d do	do	2 18	1 94
Clothing.					
Overseers		high grade	Massachusetts	40 00	35 56
Do		low do	do	15 00	13 33
Do			England	11 44	10 17
Cutters		1st grade	Massachusetts	25 00	22 22
Do		2d do	do	22 00	19 56
Do		3d do	do	20 00	17 78
Do		1st do	England	10 35	9 20
Do		2d do	do	8 17	7 25
Do			Scotland	6 41	5 70
Do			Germany	12 47	11 08
Pressers		1st grade	Massachusetts	26 00	23 11
Do		2d do	do	20 00	17 78
Do		3d do	do	16 00	15 33
Do		4th do	do	9 00	8 00
Do		1st do	England	8 17	7 26
Do		2d do	do	7 44	6 61
Do		3d do	do	4 77	4 24
Basters	women	1st do	Massachusetts	12 00	10 67
Do	do	2d do	do	9 00	8 00
Do	do	3d do	do	8 00	7 11
Do	do	4th do	do	6 00	5 33
Do	do	1st do	England	3 26	2 90
Do	do	2d do	do	2 59	2 30
Do	do	3d do	do	1 65	1 47
Machine operatives,	do 1st class	1st do	Massachusetts	17 00	15 11
Do	do do	2d do	do	15 00	13 33
Do	do do	3d do	do	14 00	12 44
Do	do 2d class	1st do	do	10 00	8 89
Do	do do	2d do	do	9 00	8 00
Do	do do	3d do	do	8 00	7 11
Do	do	1st do	England	3 84	3 41
Do	do	2d do	do	3 26	2 90
Sewers or finishers,	do	1st do	Massachusetts	7 00	6 22
Do	do	2d do	do	5 00	4 44
Do	do	3d do	do	4 00	3 56
Do			England	3 33	2 96
Tailors		1st do	Massachusetts	35 00	31 11
Do		2d do	do	30 00	26 67

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold.
Clothing—Continued.					
Tailors		3d grade	Massachusetts	$20 00	$17 78
Do		4th do	do	16 00	14 22
Do		1st do	England	10 35	9 20
Do		2d do	do	9 80	8 71
Do		3d do	do	8 17	7 26
Do		1st do	Scotland	7 63	6 78
Do		2d do	do	6 54	5 81
Do		1st do	Ireland	7 08	6 29
Do		2d do	do	6 81	6 05
Do		3d do	do	6 54	5 81
Do		1st do	Germany	8 91	7 92
Do		2d do	do	8 30	7 38
Do		3d do	do	7 29	6 48
Do		4th do	do	6 22	5 53
Do		5th do	do	5 13	4 56
Do		6th do	do	3 96	3 52
Do		7th do	do	3 51	3 12
Do		1st do	Prussia	7 29	6 48
Do		2d do	do	5 67	5 04
Do		3d do	do	4 26	3 79
Do		4th do	do	3 38	3 00
Do		1st do	Austria	16 88	15 00
Do		2d do	do	10 13	9 00
Do		1st do	France,	8 10	7 20
Do		2d do	do	6 75	6 00
Do		3d do	do	6 41	5 70
Do		4th do	do	3 85	3 42
Do		1st do	Denmark	10 13	9 00
Do		2d do	do	6 75	6 00
Do		1st do	Switzerland	6 75	6 00
Do		2d do	do	5 40	4 80
Do		3d do	do	4 05	3 60
Do			Sicily, Italy	8 10	7 20
Do		1st do	do	4 05	3 60
Do		2d do	do	3 85	3 42
Do		1st do	Russia	10 13	9 00
Do		2d do	do	8 44	7 50
Do			Tunis, Africa	4 05	3 60
Not admitting of comparison.					
Trimmers	women	1st grade	Massachusetts	15 00	13 33
Do	do	2d do	do	12 00	10 67
Do	do	3d do	do	11 00	9 78
Carpetmaking.					
Dyers		1st grade	Massachusetts	30 00	26 67
Do		2d do	do	15 00	13 33
Do		3d do	do	12 00	10 67
Do		4th do	do	10 50	9 33
Do		5th do	do	9 36	8 32
Do		6th do	do	9 00	8 00
Do		1st do	England	8 17	7 26
Do		2d do	do	6 40	5 69
Do		3d do	do	4 96	4 41
Do		4th do	do	4 42	3 93
Do		5th do	do	3 81	3 39
Do	boys	1st grade	England	3 80	3 38
Do		2d do	do	2 72	2 42

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872……	Standard gold,
Carpetmaking.—Continued.					
Dyers		3d grade	England	$1 63	$1 45
Do			Germany	2 16	1 92
Beamers	females		Massachusetts	7 50	6 67
Do	males	1st grade	England	6 81	6 05
Do		2d do	do	5 99	5 32
Do		3d do	do	5 51	4 90
Do		4th do	do	4 89	4 35
Machinists		1st do	Massachusetts	30 00	26 67
Do		2d do	do	13 33	11 85
Do		3d do	do	12 00	10 67
Do		4th do	do	11 00	9 77
Do		5th do	do	10 00	8 88
Do		6th do	do	9 18	8 16
Do		1st do	England	8 71	7 74
Do		2d do	do	8 17	7 26
Do		3d do	do	7 08	6 29
Do		4th do	do	4 91	4 36
Patternmakers		1st do	Massachusetts	24 00	21 33
Do		2d do	do	21 00	18 67
Do		3d do	do	13 36	11 87
Do		4th do	do	11 00	9 77
Do		5th do	do	8 68	7 72
Do			England	7 63	6 78
Do	boys		do	2 72	2 42
Designers		highest grade	Massachusetts	76 92	68 40
Do		lowest do	do	12 00	10 67
Do			England	6 81	6 05
Finishing		1st grade	Massachusetts	18 00	16 00
Do		2d do	do	15 00	13 33
Do		3d do	do	11 76	10 45
Do		4th do	do	10 98	9 76
Do		5th do	do	9 00	8 00
Do		6th do	do	7 50	6 67
Do	females		do	6 60	5 86
Do	men		England	5 99	5 32
Do	women		do	2 64	2 35
Do	girls		do	1 90	1 69
Do	boys	1st grade	do	2 99	2 66
Do		2d do	do	2 59	2 30
Do		3d do	do	1 63	1 45
Card cleaners			Massachusetts	9 00	8 00
Do	men		England	5 16	4 59
Do	women		do	2 44	2 17
Do	boys		do	1 90	1 69
Do	girls		do	1 22	1 08
Winders and reelers,	females		Massachusetts	6 30	5 60
Do	do	1st grade	England	2 99	2 66
Do	do	2d do	do	2 59	2 30
Do	do	3d do	do	2 13	1 89
Do	do	4th do	do	1 72	1 53
Do	girls		do	1 36	1 21
Power-loom weavers,	females		Massachusetts	8 40	7 46
Do	men	1st grade	England	7 08	6 29
Do	do	2d do	do	6 26	5 56
Do	do	3d do	do	4 26	3 79
Do	do	1st do	Germany	2 03	1 80
Do	do	2d do	do	1 62	1 44

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold,
Carpetmaking—Continued.					
Carding	females		Massachusetts	$5 25	$4 67
Do	do	1st grade	England	2 99	2 66
Do	do	2d do	do	1 77	1 57
Spinning	do		Massachusetts	5 72	5 08
Do	do	1st do	England	2 45	2 18
Do	do	2d do	do	1 63	1 45
Do	do	3d do	do	1 36	1 21
Carding and spinning	men	1st do	do	8 71	7 74
Do	do	2d do	do	8 17	7 26
Do	do	3d do	do	4 76	4 23
Do	boys	1st do	do	3 26	2 90
Do	do	2d do	do	2 72	2 42
Do	do	3d do	do	2 04	1 81
Do	do	4th do	do	1 08	96
Do	women		do	2 72	2 42
Do	children		do	95	84
Not admitting of comparison.					
Hand-loom weavers		1st grade	England	4 89	4 35
Do		2d do	do	3 80	3 38
Do		3d do	do	3 26	2 90
Do		4th do	do	2 17	1 93
Do		1st do	Germany	3 24	2 88
Do		2d do	do	2 43	2 16
Power-loom weavers, apprentices			England	4 89	4 35
Do	sorters		do	8 17	7 26
Do	washers	1st grade	do	5 99	5 32
Do	do	2d do	do	5 45	4 84
Overlookers		1st do	do	10 89	9 68
Do		2d do	do	6 27	5 57
Engineers			England	10 89	9 68
Turkish carpet-makers, Silesia, Germany:					
Males		1st grade	Germany	3 24	2 88
Do		2d do	do	2 03	1 80
Females		1st do	do	2 43	2 16
Do		2d do	do	1 22	1 08
Corsetmaking.					
Forewoman			Massachusetts	12 00	10 67
Do			England	5 45	4 84
Overlookers	females		Massachusetts	8 00	7 11
Do	do		England	1 90	1 69
Needle hands	do		Massachusetts	8 00	7 11
Do	do		England	2 18	1 94
Do	do	1st grade	Germany	2 03	1 80
Do	do	2d do	do	1 62	1 44
Embroiderers	do		Massachusetts	8 00	7 11
Do	do		England	2 99	2 66
Boners	do		Massachusetts	8 00	7 11
Do	do		England	2 45	2 18
Eyeleters	do		Massachusetts	8 00	7 11
Do	boys and girls		England	2 18	1 94
Machine hands	females		Massachusetts	9 00	8 00
Do	do		England	3 54	3 15
Pressers			Massachusetts	10 00	8 89
Do	men		England	10 89	9 68
Cutters	do		Massachusetts	18 00	16 00

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold.
Corsetmaking—Continued.					
Cutters	men		England	$10 89	$9 68
Do	females	1st grade	Germany	2 03	1 80
Do	do	2d do	do	1 62	1 44
Not admitting of comparison.					
Boxers	girls		England	1 90	1 69
Fitters	females		do	4 08	3 63
Cotton Manufactures—Carding.					
Overseer		highest	Massachusetts	30 00	26 67
Do		lowest	do	18 00	16 00
Do		1st grade	England	13 61	12 10
Do		2d do	do	12 25	10 89
Do		3d do	do	9 53	8 47
Do		4th do	do	8 17	7 26
Do		5th do	do	7 62	6 77
Do		6th do	do	7 08	6 29
Do			Germany	4 32	3 84
Openers and pickers, men		1st do	Massachusetts	9 00	8 00
Do	do	2d do	do	8 32	7 40
Do	do	3d do	do	7 50	6 67
Boys		1st do	do	6 00	5 33
Do		2d do	do	4 20	3 73
Pickers	females		England	3 36	2 90
Strippers		1st do	Massachusetts	9 00	8 00
Do		2d do	do	8 39	7 46
Do		3d do	do	7 50	6 67
Do		4th do	do	6 72	5 97
Do		1st do	England	5 98	5 32
Do		2d do	do	4 89	4 35
Do		3d do	do	4 35	3 87
Grinders		1st do	Massachusetts	9 75	8 67
Do		2d do	do	9 00	8 00
Do		3d do	do	8 64	7 68
Do		4th do	do	7 50	6 67
Do		1st do	England	5 98	5 32
Do		2d do	do	5 71	5 08
Do		1st do	Germany	4 05	3 60
Do		2d do	do	3 64	3 24
Framers, includ'g stubber, intermediate and flyer:					
Women		1st grade	Massachusetts	8 09	7 19
Do		2d do	do	7 50	6 67
Do		3d do	do	6 38	5 67
Do		4th do	do	5 70	5 07
Boys and girls		1st do	do	5 88	5 23
Do	do	2d do	do	4 80	4 27
Do	do	3d do	do	4 20	3 73
Women		1st do	England	4 49	3 99
Do		2d do	do	3 99	3 55
Do		3d do	do	3 36	2 90
Do		4th do	do	2 45	2 18
Girls			do	1 77	1 57
Spinning.					
Overseers		1st grade	Massachusetts	30 00	26 67
Do		2d do	do	16 50	14 67
Do		1st do	England	16 34	14 52
Do		2d do	do	10 89	9 68

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872......	Standard gold,
Spinning—Continued.				
Overseers	3d grade	England	$9 53	$8 47
Do	4th..do	do	8 17	7 26
Do	1st..do	Germany	4 32	3 84
Do	2d..do	do	3 85	3 42
Mule spinners.....men	1st..do	Massachusetts	14 28	12 69
Do.....do	2d..do	do	12 84	11 41
Do.....do	3d..do	do	9 00	8 00
Do.....women	1st..do	do	8 10	7 20
Do.....do	2d..do	do	6 75	6 00
Do.....do	3d..do	do	6 41	5 70
Do..men, pay their own piecers	1st..do	England	17 70	15 73
Do.....do	2d..do	do	14 97	13 31
Do.....do	3d..do	do	10 89	9 68
Do.....do	4th..do	do	9 26	8 23
Backboys	1st..do	Massachusetts	5 22	4 64
Do	2d..do	do	4 20	3 73
Do	3d..do	do	3 00	2 67
Do	1st..do	England	2 99	2 66
Do	2d..do	do	2 17	1 93
Do	3d..do	do	1 50	1 33
Frame spinners, women	1st..do	Massachusetts	6 01	5 34
Do.....do	2d..do	do	5 16	4 59
Do.....boys and girls	1st..do	do	6 00	5 33
Do.....do	2d..do	do	5 16	4 59
Do.....do	3d..do	do	4 20	3 70
Do.....men		England	7 08	6 29
Do.....boys	1st..do	do	1 63	1 45
Do.....do		do	81	72
General hands including piecers, doffers, &c.:				
Boys	1st grade	Massachusetts	6 00	5 33
Do	2d..do	do	4 50	4 00
Do	3d..do	do	3 00	2 67
Women	1st..do	England	2 72	2 42
Do	2d..do	do	2 45	2 18
Halftimers			68	60
Young persons	1st..do	do	4 35	3 87
Do	2d..do	do	4 08	3 63
Do	3d..do	do	2 69	2 39
Do	4th..do	do	1 77	1 57
Spinners.....spare hands		Massachusetts	5 10	4 53
Do.....young persons		do	5 16	4 59
Do.....spare hands		England	2 72	2 42
Do.....do		do	2 44	2 17
Do.....females		Scotland	2 72	2 42
Do.....do		do	2 45	2 18
Do	1st..do	Germany	3 85	3 42
Do	2d..do	do	3 65	3 24
Not admitting of comparison.				
Handmule spinners who employ own piecers:				
Men	1st grade	England	13 41	12 10
Do	2d..do	do	12 25	10 89
Dressing.				
Overseer	1st grade	Massachusetts	24 00	21 33
Do	2d..do	do	15 00	13 33
Do	1st..do	Germany	3 65	3 24

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold,
Dressing—Continued.					
Overseers		2d grade	Germany	$3 24	$2 88
Dressers		1st do	Massachusetts	17 40	15 47
Do		2d do	do	12 27	10 91
Do		3d do	do	10 98	9 76
Do		4th do	do	10 50	9 33
Do	women	1st do	do	13 50	12 00
Do	do	2d do	do	9 72	8 64
Do			England	5 99	5 32
Drawers		1st grade	Massachusetts	7 56	6 72
Do		2d do	do	6 30	5 60
Do		3d do	do	5 16	4 59
Do	females	1st do	England	4 08	3 63
Do	do	2d do	do	3 60	3 20
Do	do	3d do	do	3 40	3 02
Do	do	4th do	do	2 99	2 66
Twisters	men		Massachusetts	9 00	8 00
Do	women		do	6 00	5 33
Do	men		England	6 53	5 80
Do	women	1st grade	Germany	2 43	2 16
Do	do	2d do	do	1 93	1 74
Do	do	3d do	do	1 62	1 44
Not admitting of comparison.					
Second hands		1st grade	Massachusetts	16 39	14 57
Do		2d do	do	12 00	10 67
Third hands		(section)	do	9 90	8 80
Slashers			England	7 08	6 29
Spooling.					
Reelers	women	1st grade	Massachusetts	7 80	6 93
Do	do	2d do	do	6 60	5 87
Do	do	1st do	England	3 54	3 15
Do	do	2d do	do	3 12	2 77
Spoolers	women and girls	1st do	Massachusetts	6 90	6 13
Do	do	2d do	do	6 38	5 67
Do	do	3d do	do	5 40	4 80
Do	do	4th do	do	4 50	4 00
Do	do	5th do	do	4 14	3 68
Do	young persons		do	5 10	4 53
Do	do	spare	do	5 04	4 48
Do	women	1st grade	Germany	1 62	1 44
Do	do	2d do	do	1 22	1 08
Do	do	3d do	do	1 08	96
Not admitting of comparison.					
Overseer			Massachusetts	16 50	14 67
Do	2d hand		do	10 50	9 33
Do	3d hand		do	9 48	8 43
Roomhand		1st grade	do	8 22	7 31
Do		2d do	do	7 50	6 67
Warpers, women and girls		1st do	do	8 82	7 84
Do	do	2d do	do	7 80	6 93
Do	do	3d do	do	6 36	5 65
Do	do	4th do	do	5 40	4 80
Do	do	6th do	do	4 80	4 27
Twillers	women		do	4 98	4 43
Do	boys		do	3 30	2 93

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold,
Weaving.					
Weavers	men or women	1st grade	Massachusetts	$13 50	$12 00
Do	do	2d do	do	12 00	10 67
Do	do	3d do	do	11 34	10 08
Do	do	4th do	do	10 02	8 91
Do	do	5th do	do	9 00	8 00
Do	do	6th do	do	8 58	7 63
Do	do	7th do	do	7 64	6 79
Do	do	8th do	do	6 12	5 44
Do	do	9th do	do	5 76	5 12
Do	young persons		do	7 44	6 61
Do	men or women	1st grade	England	6 81	6 05
Do	do	2d do	do	5 99	5 32
Do	do	3d do	do	4 98	4 43
Do	do	4th do	do	3 67	3 26
Do	do	5th do	do	2 99	2 66
Do	females	1st do	Scotland	3 81	3 39
Do	do	2d do	do	3 24	2 88
Do	men or women	1st do	Germany	3 71	3 30
Do	do	2d do	do	3 24	2 88
Do	do	3d do	do	2 23	1 98
Do	do	4th do	do	1 62	1 44
Not admitting of comparison.					
Overseer			Massachusetts	16 50	14 67
Sectionhand			do	12 00	10 67
Dyeing.					
Overseers			Massachusetts	24 00	21 33
Do		1st grade	Germany	4 43	3 94
Do		2d do	do	4 05	3 60
Dyers		1st do	Massachusetts	10 50	9 33
Do		2d do	do	9 60	8 53
Do		3d do	do	6 00	5 33
Do	boys	1st do	do	6 00	5 33
Do	do	2d do	do	3 00	2 67
Do		1st do	Germany	2 43	2 16
Do		2d do	do	2 03	1 80
Not admitting of comparison.					
Second hand			Massachusetts	13 50	12 00
Bundlers			do	9 78	8 69
Cloth Room.					
Women		1st grade	Massachusetts	7 98	7 09
Do		2d do	do	5 64	5 01
Do		3d do	do	4 98	4 43
Do		1st do	Germany	2 43	2 16
Do		2d do	do	2 03	1 80
Not admitting of comparison.					
Overseer			Massachusetts	16 50	14 67
Second hand			do	9 72	8 64
Men		1st grade	do	11 22	9 97
Do		2d do	do	10 32	9 17
Do		3d do	do	6 00	5 33
Young persons			do	5 40	4 80

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold,
Repair Shop.		
Overseer Massachusetts	$19 50	$17 33
Do England	16 34	14 52
Mechanics 1st grade Massachusetts	17 22	15 31
Do 2d do do	10 02	8 91
Do 1st do England	9 20	8 18
Do 2d do do	8 71	7 74
Laborers 1st do Massachusetts	12 84	11 41
Do 2d do do	11 40	10 13
Do 3d do do	9 00	8 00
Do 4th do do	6 00	5 33
Do England	5 99	5 32
Yard Hands.		
Laborers 1st grade Massachusetts	12 00	10 67
Do 2d do do	10 50	9 36
Do 3d do do	9 42	8 37
Do 4th do do	7 50	6 67
Do England	4 89	4 35
Do Germany	3 65	3 24
Not admitting of comparison.		
Overseer Massachusetts	12 00	10 67
Teamster do	12 00	10 67
Engineers England	7 62	6 77
Watchmen Germany	2 84	2 52
Operatives, not classified.		
Males do	4 56	4 05
Do 1st grade Prussia	8 10	7 20
Do 2d do do	4 86	4 32
Females 1st do do	3 94	3 50
Do 2d do do	3 38	3 00
Do 3d do do	3 24	2 88
Do 4th do do	2 43	2 16
Children 1st do do	2 43	2 16
Do 2d do do	2 25	2 00
Do 3d do do	2 03	1 80
Do 4th do do	1 62	1 44
Cotton spinneries highest wages, Austria	6 48	5 76
Do lowest do do	1 29	1 15
Cotton factories highest wages, do	4 05	3 60
Do lowest do do	1 29	1 15
Do women 1st grade Switzerland	2 70	2 40
Do do 2d do do	2 03	1 80
Do men 1st do Italy	3 85	3 42
Do do 2d do do	2 45	2 18
Do women 1st do do	1 92	1 71
Do do 2d do do	1 28	1 14
Dressmakers and Milliners.		
Dressmakers, managers, females Massachusetts	15 00	13 33
Do do do England	20 87	18 55
Do without board and lodging Massachusetts	8 00	7 11
Do with board and lodging 1st grade England	8 35	7 42
Do do do 2d do do	7 08	6 29
Do do do 3d do do	3 13	2 78
Do do do 4th do do	1 16	1 03

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872......	Standard gold.
Dressmakers and Milliners—Continued.				
Dressmakers, tea only	1st grade	England	$7 35	$6 53
Do do	2d do	do	6 81	6 05
Do do	3d do	do	6 27	5 57
Do do	4th do	do	4 98	4 43
Do do	5th do	do	4 20	3 73
Do do	6th do	do	2 86	2 54
Do do	7th do	do	2 05	1 82
Do do	8th do	do	1 63	1 45
Do without board and lodging,	1st do	Germany	6 48	5 76
Do do do	2d do	do	5 67	5 04
Do do do	3d do	do	2 43	2 16
Do do do	4th do	do	2 03	1 80
Do do do	1st do	Prussia	6 48	5 76
Do do do	2d do	do	4 05	3 60
Managers females		Massachusetts	15 00	13 33
Milliners		do	8 00	7 11
Do with board and lodging	1st do	England	6 81	6 05
Do do do	2d do	do	5 06	4 50
Do do do	3d do	do	3 95	3 51
Do do do	4th do	do	2 57	2 28
Do do do	5th do	do	1 88	1 67
Do do do	6th do	do	1 56	1 39
Envelopemaking.				
Cutters	1st grade	Massachusetts	21 00	18 66
Do	2d do	do	18 00	16 00
Do	3d do	do	16 50	14 67
Do	1st do	England	10 35	9 20
Do	2d do	do	6 81	6 05
Gummers females	1st do	Massachusetts	9 00	8 00
Do do	2d do	do	8 00	7 11
Do do	3d do	do	7 50	6 67
Do do	1st do	England	5 45	4 84
Do do	2d do	do	2 72	2 42
Stampers do	1st do	Massachusetts	9 00	8 00
Do do	2d do	do	8 00	7 11
Do do	3d do	do	6 00	5 33
Do do	1st do	England	7 63	6 78
Do do	2d do	do	4 08	3 63
Do do	3d do	do	3 26	2 90
Do do	4th do	do	2 04	1 81
Folders do	1st do	Massachusetts	8 50	7 56
Do do	2d do	do	8 00	7 11
Do do	1st do	England	5 99	5 32
Do do	2d do	do	2 04	1 81
Machine hands do	1st do	Massachusetts	8 00	7 11
Do do	2d do	do	7 50	6 67
Do do	1st do	England	4 08	3 63
Do do	2d do	do	1 36	1 21
Glass Making				
Blowers		Massachusetts	10 50	8 89
Do	1st grade	Bohemia	9 00	8 00
Do	2d do	do	6 75	6 00
Do	3d do	do	5 40	4 80
Do	4th do	do	4 05	3 60
Rhinmen		Massachusetts	14 00	12 44
Do		England	9 45	8 40

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold,
Glassmaking—Continued.				
Cutters		Massachusetts	$15 00	$13 33
Do	1st grade	England	9 45	8 40
Do	2d do	do	7 02	6 24
Polishers		Massachusetts	20 00	17 78
Do	1st do	England	10 89	9 68
Do	2d do	do	9 45	8 40
Do boys		do	2 70	2 40
Do females	1st do	Bohemia	2 25	2 00
Do do	2d do	do	1 35	1 20
Not admitting of comparison.				
Gaffers		Massachusetts	18 00	16 00
Sevitors		do	15 00	13 33
Footmakers		do	15 00	13 33
Pressers		do	13 50	12 00
Gatherers at press		do	12 00	10 67
Takers-in, boys		do	4 00	3 56
Strikers-up		do	8 00	7 11
Ware-wheelers		do	10 50	9 11
Engravers		do	20 50	18 22
Mixers		do	12 00	10 67
Women and girls		do	5 00	4 44
Founders		England	9 86	8 76
Crucible fillers		do	9 72	8 64
Grinding, men		do	10 26	9 12
Grinding, boys		do	2 16	1 92
Smoothing, men		do	8 10	7 20
Smoothing, women		do	2 70	2 40
Casters	1st grade	do	9 53	8 47
Do	2d do	do	8 17	7 26
Workmen in factories	1st do	Austria	9 72	8 64
Do	2d do	do	97	86
Hats and Caps—Wool.				
Finishers	1st grade	Massachusetts	21 00	18 67
Do	2d do	do	17 50	15 56
Do	1st do	England	16 34	14 52
Do	2d do	do	10 89	9 68
Do	3d do	do	8 17	7 20
Trimmers, women	1st do	Massachusetts	9 25	8 22
Do do	2d do	do	9 00	8 00
Do do	1st do	England	5 45	4 84
Do do	2d do	do	3 13	2 78
Do do	3d do	do	2 72	2 42
Do boys	1st do	Massachusetts	10 50	9 33
Do do	2d do	do	4 20	3 72
Do		England	1 36	1 21
Silk.				
Shapers		Massachusetts	25 00	22 22
Do	1st grade	England	21 78	19 36
Do	2d do	do	16 34	14 52
Do	3d do	do	10 89	9 68
Bodymen		Massachusetts	19 23	17 09
Do	1st grade	England	13 61	12 10
Do	2d do	do	10 89	9 68
Do	3d do	do	8 17	7 26

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold,
Hats and Caps—Silk—Continued.					
Machines	women		Massachusetts	$10 00	$8 89
Do	do		England	4 08	3 63
Wool—(Not admitting of comparison.					
Carders		1st grade	Massachusetts	21 00	18 67
Do		2d ..do	do	12 00	10 67
Do		3d ..do	do	9 00	8 00
Do		4th..do	do	7 25	6 44
Do		5th..do	do	6 00	5 33
Plankers		1st ..do	do	13 50	12 00
Do		2d ..do	do	12 00	10 67
Do		3d ..do	do	9 00	8 00
Blocking			do	16 20	14 40
Hardeners			do	12 00	10 67
General work			do	15 00	13 33
Sewers	females		England	2 79	2 48
Fur.					
Makers		1st grade	Massachusetts	20 00	17 78
Do		2d ..do	do	14 00	12 44
Finishers		1st ..do	do	25 00	22 22
Do		2d ..do	do	14 00	12 44
Trimmers	women	1st ..do	do	12 00	10 67
Do	do	2d ..do	do	8 00	7 11
Silk.					
Finishers			Massachusetts	23 08	20 52
Trimmers	women		do	11 00	9 78
Plush sewers	do		do	10 00	8 89
Not classified.					
Feltmen		1st grade	England	12 25	10 89
Do		2d ..do	do	9 80	8 71
Hatters			do	9 53	8 47
Do		1st grade	Germany	8 10	7 20
Do		2d ..do	do	6 75	6 00
Do			Prussia	4 86	4 32
Iron Manufacture—Merchant Mills.					
Heaters			Massachusetts	24 00	21 33
Do		1st grade	England	13 61	12 10
Do		2d ..do	do	9 66	8 59
Do			Germany	4 86	4 32
Rollers			Massachusetts	12 00	10 67
Do			England	13 61	12 10
Do			Prussia	5 67	5 04
Laborers			Massachusetts	10 50	9 33
Do		1st grade	England	8 17	7 26
Do		2d ..do	do	6 54	5 81
Do		3d ..do	do	4 80	4 27
Do		4th..do	do	4 08	3 63
Do		1st..do	Germany	4 86	4 32
Do		2d ..do	do	4 05	3 60
Do			Prussia	4 86	4 32
Weighmen			Massachusetts	10 00	8 88
Do			England	6 81	6 05
Patternmakers			Massachusetts	24 00	21 33
Do		1st grade	England	9 26	8 23

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872.....	Standard gold,
Iron Manufacture—Merchant Mills—Continued.				
Patternmakers	2d grade	England	$7 90	$7 02
Do	3d do	do	7 39	6 57
Do	4th do	do	6 12	5 44
Do	5th do	do	5 03	4 47
Do	1st do	Germany	6 89	6 12
Do	2d do	do	6 08	5 40
Do	3d do	do	5 20	4 62
Joiners		Massachusetts	18 00	16 00
Do	1st grade	England	7 89	7 01
Do	2d do	do	7 28	6 47
Do	3d do	do	5 72	5 08
Do	4th do	do	5 03	4 47
Do	1st do	Germany	6 89	6 12
Do	2d do	do	6 08	5 40
Puddling Forge.				
Puddlers		Massachusetts	27 00	24 00
Do	1st grade	England	12 25	10 89
Do	2d do	do	11 69	10 39
Do	3d do	do	9 80	8 71
Do	4th do	do	9 53	8 74
Do	1st do	do	9 72	8 64
Do	2d do	do	7 29	6 48
Do	3d do	do	4 46	3 96
Do	1st do	Prussia	10 53	9 36
Do	2d do	do	9 72	8 64
Do	3d do	do	6 08	5 40
Shinglers		Massachusetts	27 00	24 00
Do	1st do	England	21 78	19 36
Do	2d do	do	14 98	13 31
Laborers		Massachusetts	9 00	8 00
Do	1st do	England	8 17	7 26
Do	2d do	do	6 40	5 69
Do	3d do	do	5 11	4 54
Do	4th do	do	4 08	3 63
Do	5th do	do	3 74	3 32
Do	1st do	Germany	4 86	4 32
Do	2d do	do	4 05	3 60
Do		Prussia	4 86	4 32
Puddlers' helpers		Massachusetts	11 22	9 97
Do	1st do	England	8 99	7 99
Do	2d do	do	6 54	5 81
Do	3d do	do	5 45	4 84
Do	4th do	do	4 89	4 35
Not admitting of comparison.				
Weighmen	1st grade	England	6 53	5 80
Do	2d do	do	4 89	4 35
Chargers			4 08	3 63
Workmen in blast furnaces			....	....
Do rail mills			....	....
Do plate mills			....	....
Jute Manufactures.				
Spinners		Massachusetts	8 75	7 78
Do		Scotland	7 35	6 53
Do boys		Massachusetts	5 50	4 89

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold,
Jute Manufactures—Continued.					
Spinners	boys	1st grade	Scotland	$2 18	$1 94
Do	do	2d do	do	1 90	1 69
Do	women	1st do	Massachusetts	8 75	7 78
Do	do	2d do	do	7 50	6 67
Do	do	3d do	do	6 00	5 33
Do	do	1st do	Scotland	2 72	2 42
Do	do	2d do	do	2 50	2 22
Do	do	3d do	do	2 31	2 05
Shifters	girls		Massachusetts	3 75	3 33
Do	do	1st do	Scotland	1 56	1 39
Do	do	2d do	do	1 01	90
Piecers	do		Massachusetts	4 00	3 56
Do	do	1st do	Scotland	1 90	1 69
Do	do	2d do	do	1 22	1 08
Bobbin carriers, men			Massachusetts	7 50	6 67
Do do	boys		Scotland	1 22	1 08
Winders	do		Massachusetts	3 96	3 52
Do	do		Scotland	2 17	1 93
Do	women and girls	1st do	Massachusetts	7 25	6 44
Do	do do	2d do	do	5 00	4 44
Packing		2d do	Scotland	4 08	3 63
Mechanics			Massachusetts	16 50	14 67
Do		1st do	Scotland	7 62	6 77
Do		2d do	do	6 81	6 05
Oilers		1st do	Massachusetts	8 50	7 56
Do		2d do	do	7 50	6 67
Do		3d do	do	7 00	6 22
Do			Scotland	4 22	3 75
Weavers	female	1st do	Massachusetts	13 50	12 00
Do	do	2d do	do	8 50	7 56
Do	do	3d do	do	8 00	7 11
Do	do	4th do	do	5 28	4 69
Do	do	1st do	Scotland	3 26	2 90
Do	do	2d do	do	2 86	2 54
Do	do	3d do	do	2 51	2 23
Carders		1st do	Massachusetts	10 50	9 33
Do		2d do	do	8 00	7 11
Do		3d do	do	7 00	6 22
Do		4th do	do	6 50	5 78
Do	boys		do	5 00	4 44
Do			Scotland	2 31	2 05
Rovers		1st do	Massachusetts	7 50	6 67
Do		2d do	do	5 50	4 89
Do			Scotland	2 31	2 05
Drawers			Massachusetts	4 50	4 00
Do			Scotland	2 17	1 93
Feeders	boys		Massachusetts	6 50	5 78
Do			Scotland	2 24	1 99
Bundlers			Massachusetts	8 50	7 56
Do			Scotland	2 99	2 66
Winders	women		Scotland	2 31	2 05
Reelers			Massachusetts	8 00	7 11
Do	do	1st do	Scotland	2 13	2 78
Do	do	2d do	do	2 31	2 05
Warpers	do		Massachusetts	5 00	4 44
Do	do		Scotland	2 17	1 93
Packing department			Massachusetts	9 00	8 00
Do		1st do	Scotland	5 99	5 32

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.		AV'GE WEEKLY WAGES.	
		Standard U. S. paper dollar of 1872......	Standard gold,
Not admitting of comparison.			
Warpers men	Massachusetts	$10 00	$8 89
Weavers do	do	13 50	12 00
Calender do	do	10 00	8 89
Batching do	do	7 00	6 22
Sparemen 1st grade	do	8 00	7 11
Do 2d do	do	5 00	4 44
Twisters	Scotland	2 51	2 23
Repairing 1st do	do	2 17	1 93
Do 2d do	do	1 77	1 57
Tenters	do	6 81	6 05
Do assistant	do	4 89	4 35
Half-timers	do	54	48
Locomotive Engine Making.			
Fitters	Massachusetts	16 20	14 40
Do	Scotland	6 81	6 05
Finishers	Massachusetts	16 20	14 40
Do	Scotland	6 81	6 05
Machinists, including turners	Massachusetts	16 20	14 40
Do do	Scotland	6 81	6 05
Shapers	Massachusetts	16 20	14 40
Do	Scotland	6 81	6 05
Planers	Massachusetts	16 20	14 40
Do	Scotland	6 81	6 05
Slotters	Massachusetts	16 20	14 40
Do	Scotland	6 81	6 05
Drillers	Massachusetts	11 48	10 20
Do	Scotland	4 35	3 87
Erectors and boiler mounters	Massachusetts	14 40	12 80
Same branches	Scotland	7 35	6 53
Patternmakers	Massachusetts	19 80	17 60
Do	Scotland	7 62	6 77
Iron and brass moulders	Massachusetts	16 50	14 67
Same branches	Scotland	7 88	7 00
Coppersmiths	Massachusetts	18 00	16 00
Do	Scotland	7 62	6 77
Boilermakers	Massachusetts	16 50	14 67
Do	Scotland	7 03	6 25
Smiths	Massachusetts	18 00	16 00
Do	Scotland	7 03	6 25
Forgemen, or helpers	Massachusetts	11 48	10 20
Do	Scotland	9 53	8 47
Laborers	Massachusetts	9 60	8 53
Do	Scotland	4 08	3 63
Steamhammermen	Massachusetts	22 50	20 00
Hammermen	Scotland	4 62	4 11
Not admitting of comparison.			
Grinders	Scotland	8 44	7 50
Railroad shops.			
Machinists	Massachusetts	17 00	15 11
Patternmakers	do	19 50	17 33
Coppersmiths	do	19 50	17 33
Boilermakers	do	19 50	17 33
Smiths	do	17 00	15 11
Forgemen, or helpers	do	12 00	10 67

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872……	Standard gold.
Watchmaking.				
Men		Massachusetts	$18 00	$16 00
Do	1st grade	England	4 91	4 36
Do	2d do	do	4 08	3 63
Women and girls		Masachusetts	4 50	4 00
Do	1st grade	England	2 95	2 62
Do	2d do	do	2 58	2 29
Do	3d do	do	2 18	1 94
Boys over 13		do	1 90	1 69
Girls, one-half timers		do	68	60
Boys timers	1st grade	do	96	85
Do	2d do	do	72	64
Preserved Meats, Pickles, &c.				
Men	1st grade	Massachusetts	15 00	13 33
Do	2d do	do	13 50	12 00
Do		England	5 72	5 08
Women		Massachusetts	5 00	4 44
Do		England	3 24	2 88
Not admitting of comparison.				
Packers		England	7 91	7 03
Corkers men		do	8 44	7 50
Do women		do	4 05	3 60
Labellers		do	4 05	3 60
Boys	1st grade	do	2 72	2 42
Do	2d do	do	1 63	1 45
Printing.				
Compositors, book males	1st grade	Massachusetts	32 50	28 89
Do do do	2d do	do	18 00	16 00
Do do do	3d do	do	12 00	10 67
Do do do	4th do	do	6 00	5 33
Do weekly papers		do	15 20	13 51
Do dailies do	1st grade	do	38 00	33 78
Do do do	2d do	do	30 00	26 67
Do do do	3d do	do	25 00	22 00
Do do do	4th do	do	23 00	20 44
Do book females	1st do	do	12 00	10 67
Do do do	2d do	do	10 00	8 89
Do do do	3d do	do	8 00	7 11
Do do do	4th do	do	7 00	6 22
Do do do	5th do	do	6 00	5 33
Do do do	6th do	do	5 00	4 44
Do weeklies do	1st do	do	18 00	16 00
Do do do	2d do	do	8 00	7 11
Do do do	3d do	do	5 00	4 44
Do book males	1st do	England	13 61	12 10
Do do do	2d do	do	11 55	10 27
Do do do	3d do	do	11 03	9 80
Do do do	4th do	do	9 80	8 71
Do do do	5th do	do	8 62	7 66
Do do do	6th do	do	7 48	6 65
Do do do	7th do	do	6 54	5 81
Do do do	8th do	do	5 45	4 8
Do weeklies do	1st do	do	8 44	7 54
Do do do	2d do	do	7 63	6 70
Do do do	3d do	do	6 54	5 88

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold,
Printing.—Continued.		
Compositors, dailies..........males....1st grade..England.........	$10 89	$9 68
Do..........do..............do......2d ..do........do..........	9 26	8 23
Do..........do..............do......3d ..do........do..........	8 71	7 74
Do.........book.............do......1st..do....Scotland.........	10 89	9 68
Do..........do..............do......2d ..do........do..........	9 53	8 47
Do..........do..............do......3d ..do........do..........	8 17	7 26
Do..........do..............do......4th..do........do..........	7 70	6 84
Do..........do..............do......5th..do........do..........	7 48	6 65
Do.........dailies...........do......1st..do........do..........	14 97	13 31
Do..........do..............do......2d ..do........do..........	11 71	10 41
Do..........do..............do......3d ..do........do..........	10 89	9 68
Do..........do..............do......4th..do........do..........	9 53	8 47
Do..........do..............do......5th..do........do..........	8 85	7 87
Do..........do..............do......6th..do........do..........	8 17	7 26
Pressmen...jobbing...........do......1st..do....Massachusetts...	19 00	16 89
Do..........do..............do......2d ..do........do..........	17 50	15 56
Do..........do..............do......3d ..do........do..........	15 00	13 33
Do..........do..............do......4th..do........do..........	14 00	12 44
Do..........do..............do......5th..do........do..........	12 00	10 67
Do..........do.............females...................do..........	7 00	6 22
Do..........do.............boys......1st..do........do..........	6 00	5 33
Do..........do..............do......2d ..do........do..........	3 00	2 67
Do.........book & weekl's..men.....1st..do........do..........	22 00	19 56
Do..........do..............do......2d ..do........do..........	18 75	16 27
Do..........do..............do......3d ..do........do..........	18 00	16 00
Do..........do..............do......4th..do........do..........	15 20	13 51
Do..........do.............apprentices..............do..........	7 00	6 22
Do..........do.............females..................do..........	7 00	6 22
Do.........dailies..........males....1st grade......do..........	25 00	22 22
Do..........do..............do......2d ..do........do..........	21 00	18 67
Do..........do..............do......3d ..do........do..........	18 00	16 00
Do..........do..............do......4th..do........do..........	15 00	13 33
Do..jobb'g, book, week's, &c., do......1st..do....England.........	13 61	12 10
Do..........do..............do......2d ..do........do..........	12 12	10 77
Do..........do..............do......3d ..do........do..........	11 16	9 92
Do..........do..............do......4th..do........do..........	9 53	8 47
Do..........do..............do......5th..do........do..........	8 63	7 67
Do..........do..............do......6th..do........do..........	7 63	6 78
Do..........do..............do......7th..do........do..........	5 45	4 84
Do..........do.............boys.....................do..........	1 63	1 45
Do.........on dailies........males...................do..........	9 26	8 23
Do..jobb'g, book, week's, &c., do......1st grade..Scotland.........	10 89	9 68
Do..........do..............do......2d ..do........do..........	9 53	8 47
Do..........do..............do......3d ..do........do..........	8 44	7 50
Do..........do..............do......4th..do........do..........	7 48	6 65
Do..........do.............females..1st..do........do..........	3 24	2 88
Do..........do..............do......2d ..do........do..........	1 63	1 45
Do..........do..............do......3d ..do........do..........	1 09	97
Do..........do.............boys......1st..do........do..........	4 91	4 36
Do..........do..............do......2d ..do........do..........	4 35	3 87
Do..........do..............do......3d ..do........do..........	2 72	2 42
Do..........do..............do......4th..do........do..........	1 63	1 45
Do..........do..............do......5th..do........do..........	1 09	97
Not admitting of comparison.		
Proof-readers ....1st grade..Massachusetts...	45 00	40 00
Do.....................................2d ..do ....do..........	20 00	17 78

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872.	Standard gold.
Printing—Continued.					
Printers		1st grade	Massachusetts	$18 00	$16 00
Do		2d do	do	13 33	11 85
Do	boys		do	6 50	5 78
Do	do	1st grade	Germany	8 10	7 20
Do	do	2d do	do	6 58	5 85
Do	do	3d do	do	5 40	4 80
Do	do	1st do	Austria	2 59	2 30
Do	do	2d do	do	2 10	1 87
Paper Manufacture.					
Foremen			Massachusetts	18 00	16 00
Do			Germany	3 51	3 12
Millwrights			Massachusetts	18 00	16 00
Do			Germany	5 27	4 68
Rag engine tenders			Massachusetts	16 50	14 67
Do			England	6 53	5 80
Do			Germany	3 24	2 88
Paper machine tenders, men		1st grade	Massachusetts	18 00	16 00
Do	do	2d do	do	12 00	10 66
Do	do	3d do	do	10 00	8 89
Do			England	6 53	5 80
Finishing room	men	1st grade	Massachusetts	13 50	12 00
Do	do	2d do	do	12 00	10 66
Do	do	1st do	England	7 08	6 29
Do	do	2d do	do	5 99	5 32
Do	do	3d do	do	5 45	4 84
Helpers		1st do	Massachusetts	9 75	8 67
Do		2d do	do	9 00	8 00
Do		1st do	England	5 16	4 59
Do		2d do	do	4 62	4 11
Do		3d do	do	4 08	3 63
Do		1st do	Germany	3 11	2 76
Do		2d do	do	2 43	2 16
Finishing girls			Massachusetts	7 80	6 93
Finishing room	girls	1st grade	England	3 53	3 14
Do	do	2d do	do	2 44	2 17
Do	do	3d do	do	1 63	1 45
Cutters	men		Massachusetts	10 00	8 89
Do	do		England	4 05	3 60
Bleachers			Massachusetts	10 00	8 89
Do			England	4 89	4 35
Do			Germany	3 24	2 88
Machine assistants	boys		Massachusetts	7 50	6 66
Do	do		England	3 26	2 90
Female assistants		1st grade	do	3 80	3 38
Do		2d do	do	2 86	2 54
Do		3d do	do	1 68	1 49
Do		4th do	do	1 08	96
Rag sorters			Massachusetts	4 50	4 00
Do	females		England	2 72	2 42
Do	do		Germany	1 62	1 44
Men on stock			Massachusetts	10 50	9 33
Women on stock			England	2 72	2 42
Not admitting of comparison.					
Engineers		1st grade	Massachusetts	13 50	12 00
Do		2d do	do	12 00	10 66

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar of 1872	Standard gold.
Paper Manufacture—Continued.				
Thrashermen		Massachusetts	$10 00	$8 89
Cutters, girls		do	6 00	5 33
Firemen		do	10 00	8 89
Half-timers	1st grade	England	1 08	96
Do	2d do	do	54	48
Makers, wall paper		Germany	4 05	3 60
Employees in paper factories, girls	1st grade	do	3 24	2 88
Do do do	2d do	do	1 62	1 44
Do do hands,	1st do	Austria	4 86	4 32
Do do do	2d do	do	1 29	1 15
Men	1st grade	Belgium	12 15	10 80
Do	2d do	do	3 65	3 24
Women	1st do	do	1 45	1 29
Do	2d do	do	1 22	1 08
Laborers	1st do	do	3 04	2 70
Do	2d do	do	1 82	1 62
Ropemaking.				
Hand spinners		Massachusetts	13 25	11 78
Do	1st grade	England	7 35	6 53
Do	2d do	do	6 27	5 57
Machine spinners		Massachusetts	10 00	8 89
Do		England	6 54	5 81
Do women		Massachusetts	6 00	5 33
Do do		England	1 90	1 69
Do boys		Massachusetts	4 75	4 22
Do do		England	2 45	2 18
Ropemakers		Massachusetts	14 00	12 44
Do		England	5 99	5 32
Do boys		Massachusetts	5 00	4 44
Do do		England	2 72	2 42
Teamsters		Massachusetts	11 00	9 78
Do		England	5 45	4 84
Making up and packing, men		Massachusetts	10 50	9 33
Do do do		England	5 99	5 32
Engineers		Massachusetts	18 00	16 00
Do		England	7 63	6 78
Blacksmiths		Massachusetts	15 00	13 33
Do		England	7 08	6 29
Carpenters		Massachusetts	15 00	13 33
Do		England	6 54	5 81
Not admitting of comparison.				
Filemen		Massachusetts	11 00	9 78
Machinists		do	17 50	15 56
Laborers		do	11 00	9 78
Rubber manufactures.				
Skilled workmen—Men	1st grade	Massachusetts	21 00	18 67
Do do	2d do	do	18 00	16 00
Do do	3d do	do	15 00	13 33
Do do	4th do	do	14 00	12 44
Do do	5th do	do	12 00	10 67
Do do	1st do	England	16 34	14 52
Do do	2d do	do	10 89	9 68
Do do	3d do	do	8 44	7 50
Do do	4th do	do	7 08	6 29

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872	Standard gold,
Rubber Manufactures—Continued.		
Ordinary workmen—Men 1st grade Massachusetts	$12 00	$10 67
Do do 2d do do	10 80	9 60
Do do 3d do do	9 96	8 85
Do do 4th. do do	9 50	8 44
Do do 1st do England	6 80	6 04
Do do 2d do do	5 72	5 08
Do do 3d do do	5 00	4 44
Do do 4th. do do	4 35	3 87
Do Boys 1st do Massachusetts	7 00	6 22
Do do 2d do do	6 00	5 33
Do do 3d do do	4 00	3 56
Do do 1st do England	3 80	3 38
Do do 2d do do	2 99	2 66
Do do 3d do do	1 77	1 57
Do do 4th. do do	1 36	1 21
Do Women 1st do Massachusetts	8 50	7 56
Do do 2d do do	8 00	7 11
Do do 3d do do	7 00	6 22
Do do 1st do England	4 91	4 36
Do do 2d do do	3 81	3 39
Do do 3d do do	3 26	2 90
Do do 4th, do do	2 45	2 18
Do Girls 1st. do Massachusetts	7 00	6 22
Do do 2d do do	6 00	5 33
Do do 1st do England	2 45	2 18
Do do 2d do do	1 63	1 45
Do do 3d do do	1 09	97
Mechanical hands—Men 1st do Massachusetts	20 00	17 78
Do do 2d do do	18 00	16 00
Do do 3d do do	16 00	14 22
Do do 1st do England	5 72	5 08
Do do 2d do do	3 81	3 39
Do do 3d do do	3 26	2 90
Ship Building—Wooden Ships.		
Carpenters, old work Massachusetts	24 00	21 33
Do new do do	18 00	16 00
Do out doors England	11 43	10 16
Do in shop do	9 80	8 71
Do Scotland	7 35	6 53
Boat-builders Massachusetts	15 00	13 33
Do England	9 80	8 71
Do Scotland	7 35	6 53
Calkers old work Massachusetts	24 00	21 33
Do new do do	18 00	16 00
Do England	9 80	8 71
Do Scotland	5 99	5 32
Joiners old work Massachusetts	24 00	21 33
Do new do do	18 00	16 00
Do England	8 98	7 98
Do Scotland	7 41	6 59
Painters Massachusetts	15 00	13 33
Do England	8 24	7 32
Do Scotland	8 17	7 26
Riggers Massachusetts	21 00	18 67
Do England	8 17	7 26
Do Scotland	7 08	6 29

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.			AV'GE WEEKLY WAGES.	
			Standard U. S. paper dollar, of 1872......	Standard gold,
Marine Engineering.				
Draughtsmen		Massachusetts	$21 00	$18 67
Do		Scotland	9 25	8 22
Pattern-makers		Massachusetts	19 20	17 07
Do	1st grade	England	9 80	8 71
Do	2d .. do	do	9 26	8 23
Do	1st .. do	Scotland	7 21	6 41
Do	2d .. do	do	6 53	5 80
Blacksmiths		Massachusetts	16 50	14 67
Do	1st .. do	England	10 61	9 43
Do	2d .. do	do	9 80	8 71
Do	1st .. do	Scotland	7 35	6 53
Do	2d .. do	do	6 81	6 05
Hammermen		Massachusetts	30 00	26 67
Do		England	5 99	5 32
Do		Scotland	4 35	3 87
Machinists		Massachusetts	16 80	14 93
Do	1st .. do	England	9 80	8 71
Do	2d .. do	do	9 25	8 22
Do	3d .. do	do	8 17	7 26
Do	4th .. do	do	7 08	6 29
Do	5th .. do	do	5 45	4 84
Do	1st .. do	Scotland	6 81	6 05
Do	2d .. do	do	6 49	5 77
Do	3d .. do	do	6 19	5 50
Borers		Massachusetts	15 00	13 33
Do		Scotland	4 42	3 93
Boilermakers		Massachusetts	15 00	13 33
Do	1st grade	England	9 80	8 71
Do	2d .. do	do	8 99	7 99
Do	3d .. do	do	8 17	7 26
Do	1st .. do	Scotland	7 28	6 47
Do	2d .. do	do	6 12	5 44
Helpers and laborers, men		Massachusetts	12 00	10 67
Do boys		do	5 00	4 44
Do men	1st grade	England	6 27	5 57
Do do	2d .. do	do	5 72	5 08
Do do	3d .. do	do	4 91	4 36
Do do	1st .. do	Scotland	5 99	5 32
Do do	2d .. do	do	3 80	3 38
Do do	1st .. do	Austria	6 48	5 76
Do do	2d .. do	do	2 62	2 33
Not admitting of comparison.				
Workmen on iron ships			......	......
Safe and Lockmaking.				
Men	1st grade	Massachusetts	18 00	16 00
Do	2d .. do	do	16 50	14 67
Do	1st .. do	England	24 68	21 94
Do	2d .. do	do	14 97	13 31
Do	3d .. do	do	11 43	10 16
Do	4th .. do	do	8 17	7 26
Laborers		Massachusetts	10 00	8 89
Do	1st grade	England	9 53	8 47
Do	2d .. do	do	4 89	4 35
Not admitting of comparison.				
Boys and young persons	1st grade	England	3 53	3 14

RATES OF WAGES—*Continued.*

OCCUPATIONS AND COUNTRIES.	AV'GE WEEKLY WAGES.	
	Standard U. S. paper dollar of 1872.....	Standard gold,
Safe and Lock making—Continued.		
Boys and young persons.....2d grade.....England.....	$1 63	$1 45
Women.....1st..do.....do.....	3 53	3 14
Do.....2d..do.....do.....	2 44	2 17
Soap and Candle Making.		
Men.....1st grade.....Massachusetts...	15 00	13 33
Do.....2d..do.....do.....	14 00	12 44
Do.....3d..do.....do.....	13 00	11 56
Do.....4th..do.....do.....	12 75	11 33
Do.....England.....	6 48	5 76
Candle making.....Massachusetts...	12 00	10 67
Do.....England.....	5 40	4 80
Soap factory, girls.....Massachusetts...	5 00	4 44
Do.....boys.....England.....	2 70	2 40
Do.....do.....2d grade.....do.....	1 35	1 20
Type Foundries.		
Casters.....Massachusetts...	18 00	16 00
Do.....1st grade.....England.....	8 98	7 98
Do.....2d..do.....do.....	7 62	6 77
Do.....1st..do.....Germany.....	8 10	7 20
Do.....2d..do.....do.....	5 40	4 80
Rubbers.....females.....Massachusetts...	8 00	7 11
Do.....men.....1st grade.....England.....	6 53	5 80
Do.....do.....2d..do.....do.....	4 89	4 35
Dressers.....Massachusetts...	25 00	22 22
Do.....2d grade.....England.....	8 98	7 98
Boys.....Massachusetts...	4 00	3 56
Do.....1st grade.....England.....	2 72	2 42
Do.....2d..do.....do.....	1 36	1 21
Girls, (small,).....Massachusetts...	4 00	3 56
Tanners and Curriers.		
Splitters.....Massachusetts...	18 00	16 00
Knifemen.....1st grade.....do.....	17 00	15 11
Do.....2d..do.....do.....	16 00	14 22
Do.....3d..do.....do.....	15 00	13 33
Do.....4th..do.....do.....	14 00	12 44
Tablemen.....1st..do.....do.....	12 50	11 11
Do.....2d..do.....do.....	12 00	10 67
Do.....3d..do.....do.....	11 00	9 78
Do.....4th..do.....do.....	9 50	8 44
Curriers.....1st grade.....England.....	10 26	9 12
Do.....2d..do.....do.....	10 02	8 91
Do.....3d..do.....do.....	8 91	7 92
Do.....4th..do.....do.....	8 17	7 26
Do.....5th..do.....do.....	4 91	4 36
Tanners.....1st grade.....Massachusetts...	12 75	11 33
Do.....2d..do.....do.....	12 20	10 84
Do.....3d..do.....do.....	11 94	10 61
Do.....4th..do.....do.....	11 57	10 28
Do.....5th..do.....do.....	10 13	9 00
Do.....1st grade.....England.....	8 64	7 68
Do.....2d..do.....do.....	6 24	7 02
Do.....3d..do.....do.....	5 14	5 78
Do.....4th..do.....do.....	6 21	5 52
Do.....boys.....do.....	3 11	2 76

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold.
Tanners and Curriers—Continued.					
Tanners		1st grade	Ireland	$6 54	$5 81
Do		2d do	do	4 91	4 36
Do		1st do	Germany	5 67	5 04
Do		2d do	do	4 96	4 41
Do		3d do	do	3 92	3 48
Do		4th do	do	3 58	3 18
Do			Prussia	6 48	5 76
Do		1st grade	Austria	8 10	7 20
Do		2d do	do	3 24	2 88
Do		3d do	do	2 76	2 45
Do		1st do	Italy	5 77	5 13
Do		2d do	do	4 73	4 20
Do		3d do	do	3 85	3 42
Do		1st do	Switzerland	6 75	6 00
Do		2d do	do	4 05	3 60
Do			Denmark	5 40	4 80
Do		1st grade	France	6 75	6 00
Do		2d do	do	6 41	5 70
Do		3d do	do	5 40	4 80
Do		4th do	do	4 73	4 20
Do		5th do	do	2 70	2 40
Do		1st do	Russia	7 56	6 72
Do		2d do	do	6 75	6 00
Do			Tunis, Africa	2 50	2 22
Tobacco and Cigars.					
Strippers	women	1st grade	Massachusetts	8 00	7 11
Do	do	2d do	do	7 00	6 22
Do	do	1st do	England	6 54	5 81
Do	do	2d do	do	5 99	5 32
Do	do	3d do	do	4 08	3 63
Do	do	4th do	do	3 26	2 90
Do	do	5th do	do	2 45	2 18
Do	boys		Massachusetts	7 00	6 22
Do	do	1st grade	England	5 45	4 84
Do	do	2d do	do	3 26	2 90
Do	do	3d do	do	2 72	2 42
Do	do	4th do	do	1 90	1 69
Packers			Massachusetts	20 00	17 77
Do		1st grade	England	6 81	6 05
Do		2d do	do	4 08	3 63
Do			Belgium	3 36	2 99
Cigarmakers		1st grade	Massachusetts	22 00	19 59
Do		2d do	do	17 00	15 11
Do		3d do	do	15 00	13 33
Do		1st do	England	10 89	9 68
Do		2d do	do	8 17	7 26
Do	women	1st do	do	4 08	3 63
Do	do	2d do	do	2 72	2 42
Do		1st do	Scotland	9 26	8 23
Do		2d do	do	6 27	5 57
Do		1st do	Germany	6 48	5 76
Do		2d do	do	4 86	4 32
Do	men		Prussia	4 86	4 32
Do	women		do	2 84	2 52
Do			Belgium	4 28	3 80
Foreman			Massachusetts	20 00	17 77
Do			Scotland	9 53	8 47

RATE OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1873	Standard gold.
Tobacco and Cigars—Not admitting of comparison—Continued.					
Cutters		1st grade	England	9 53	8 47
Do		2d do	do	7 21	6 41
Do		3d do	do	6 81	6 05
Dryers		1st do	do	8 17	7 26
Do		2d do	do	4 91	4 36
Spinners		1st do	do	9 53	8 47
Do		2d do	do	8 17	7 26
Do		3d do	do	6 81	6 05
Do			Scotland	6 81	6 05
Sorters		1st grade	England	8 17	7 26
Do		2d do	do	6 81	6 05
Snuffmakers		1st do	do	6 81	6 05
Do		2d do	do	5 72	5 08
Do	boys	1st do	England	4 91	4 36
Do	do	2d do	do	1 36	1 21
Do	do	1st do	Scotland	1 36	1 21
Do	do	2d do	do	1 16	1 03
Do	do	3d do	do	68	60
Do	girls	1st do	do	2 18	1 94
Do	do	2d do	do	1 63	1 45
Do	do	3d do	do	82	73
Do	do	1st do	Germany	2 43	2 16
Do	do	2d do	do	1 22	1 08
Do	girls and women		Belgium	1 61	1 43
Half-timers		1st grade	Scotland	41	36
Do		2d do	do	34	30
Woolen Manufactures—Washing and Sorting.					
Washing	men		Massachusetts	9 00	8 00
Do	do	1st grade	England	5 92	5 08
Do	do	2d do	do	5 18	4 60
Do	do	3d do	do	4 35	3 87
Do	men or women	1st do	Germany	6 48	5 76
Do	do	2d do	do	5 81	5 16
Do	do	3d do	do	3 87	3 44
Do	do	4th do	do	2 70	2 40
Do	do	5th do	do	2 43	2 16
Do	do	1st do	Prussia	4 05	3 60
Do	do	2d do	do	2 84	2 52
Do	do	3d do	do	2 03	1 80
Do			Austria	1 58	1 40
Sorting	men	1st grade	Massachusetts	12 00	10 67
Do	do	2d do	do	10 73	9 54
Do	do	3d do	do	10 06	8 94
Do	do	4th do	do	9 30	8 82
Do	boys	1st do	do	6 00	5 33
Do	do	2d do	do	4 80	4 27
Do	men	1st do	England	8 99	7 99
Do	do	2d do	do	8 17	7 26
Do	do	3d do	do	7 21	6 41
Do	do	4th do	do	6 26	5 56
Do	do	5th do	do	5 51	4 90
Do	do	6th do	do	4 89	4 35
Do	do	1st do	Germany	6 48	5 76
Do	do	2d do	do	5 67	5 04
Do	do	3d do	do	2 94	2 61
Do	do	4th do	do	2 57	2 28

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold,
Woolen Manufactures—Washing and Sorting—Continued.					
Sorting	women.	1st..do	Germany	$2 57	$2 28
Do	do	2d..do	do	1 69	1 50
Do	do	3d..do	do	1 22	1 08
Do	men or women	1st..do	Prussia	2 43	2 16
Do	do	2d..do	do	1 76	1 56
Do	do	3d..do	do	1 42	1 26
Do	do	1st..do	Austria	2 70	2 40
Do	do	2d..do	do	1 96	1 74
Do	do	3d..do	do	1 06	94
Scouring, Dyeing and Drying.					
Scouring	men	1st grade	Massachusetts	9 30	8 82
Do	do	2d..do	do	8 38	7 45
Do	do	3d..do	do	6 75	6 00
Dyeing	do	1st..do	do	10 02	8 91
Do	do	2d..do	do	9 29	8 26
Do	do	3d..do	do	7 50	6 67
Do	do	1st..do	England	7 08	6 29
Do	do	2d..do	do	5 85	5 20
Do	do	3d..do	do	5 18	4 60
Do	do	4th..do	do	4 62	4 11
Do	do	1st..do	Germany	3 65	3 24
Do	do	2d..do	do	2 85	2 53
Do	do	3d..do	do	2 43	2 16
Do	do	1st..do	Prussia	3 24	2 88
Do	do	2d..do	do	2 88	2 56
Do	do	3d..do	do	2 43	2 16
Do	do	1st..do	Austria	2 16	1 92
Do	do	2d..do	do	1 83	1 63
Do	do	3d..do	do	1 67	1 48
Drying	do	1st..do	Massachusetts	9 70	8 62
Do	do	2d..do	do	7 63	6 78
Do	do	3d..do	do	6 75	6 00
Carding	do	1st..do	do	10 02	8 90
Do	do	2d..do	do	9 72	8 64
Do	do	3d..do	do	9 00	8 00
Do	do	4th..do	do	8 27	7 35
Do	do	5th..do	do	7 66	6 81
Do	do	6th..do	do	6 76	6 01
Do	do	7th..do	do	6 00	5 33
Do	women	1st..do	do	6 00	5 33
Do	do	2d..do	do	5 54	6 81
Do	do	3d..do	do	4 60	4 09
Do	do	4th..do	do	3 90	3 47
Do	boys and girls	1st..do	do	5 40	4 80
Do	do	2d..do	do	4 50	4 00
Do	do	3d..do	do	3 00	2 67
Do	men	1st..do	England	5 45	4 84
Do	do	2d..do	do	5 03	4 47
Do	do	3d..do	do	4 61	4 11
Do	women	1st..do	do	5 53	3 14
Do	do	2d..do	do	3 26	2 90
Do	do	3d..do	do	2 72	2 42
Do	girls and boys	1st..do	do	2 72	2 42
Do	do	2d..do	do	2 44	2 17
Do	do	3d..do	do	1 90	1 69
Do	men	1st..do	Germany	2 88	3 24

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U.S. paper dollar of 1872......	Standard gold,
Scouring, Dyeing and Drying—Continued.					
Carding	men	2d grade	Germany	$3 24	$2 88
Do	do	3d do	do	2 83	2 52
Do	women	1st do	do	3 24	2 88
Do	do	2d do	do	2 25	2 00
Do	do	3d do	do	1 89	1 68
Do	boys and girls	1st do	do	1 96	1 74
Do	do	2d do	do	1 62	1 44
Do	do	3d do	do	1 08	96
Do	men or women	1st do	Prussia	3 24	2 88
Do	do	2d do	do	2 93	2 60
Do	do	3d do	do	2 57	2 28
Do	do	1st do	Austria	2 03	1 80
Do	do	2d do	do	1 35	1 20
Spinning	men	1st do	Massachusetts	13 50	12 00
Do	do	2d do	do	12 48	11 09
Do	do	3d do	do	12 00	10 67
Do	do	4th do	do	10 37	9 22
Do	do	5th do	do	9 66	8 59
Do	do	6th do	do	9 00	8 00
Do	do	7th do	do	5 40	4 80
Do	women	1st do	do	8 04	7 15
Do	do	2d do	do	7 35	6 54
Do	young persons		do	5 40	4 80
Do	men	1st grade	England	8 72	7 75
Do	do	2d do	do	8 17	7 26
Do	do	3d do	do	7 62	6 77
Do	do	4th do	do	6 81	6 05
Do	do	5th do	do	6 26	5 56
Do	do	6th do	do	5 16	4 59
Do	do	7th do	do	4 08	3 63
Do	do	8th do	do	3 26	2 90
Do	women	1st do	do	2 86	2 54
Do	do	2d do	do	2 64	2 35
Do	do	3d do	do	2 44	2 17
Do	young persons	1st do	do	2 99	2 66
Do	do	2d do	do	2 41	2 14
Do	do	3d do	do	1 94	1 72
Do	do	4th do	do	1 36	1 31
Do	half-timers	1st do	England	95	84
Do	do	2d do	do	68	60
Do	men	1st do	Germany	8 10	7 20
Do	do	2d do	do	7 29	6 48
Do	do	3d do	do	4 86	4 32
Do	do	4th do	do	4 95	3 96
Do	do	5th do	do	3 85	3 42
Do	do	6th do	do	2 63	2 34
Do	do	7th do	do	2 43	2 16
Do	women	1st do	do	4 05	3 60
Do	do	2d do	do	3 24	2 88
Do	do	3d do	do	1 89	1 68
Do	young persons	1st do	do	3 24	2 88
Do	do	2d do	do	2 77	2 46
Do	do	3d do	do	1 62	1 44
Do	do	4th do	do	1 08	96
Do	do	5th do	do	81	72
Do	men	1st do	Prussia	4 86	4 32
Do	do	2d do	do	4 05	3 60

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar in 1872.....	Standard gold,
Scouring, Dyeing and Drying—Continued.					
Spinning	men	3d grade	Prussia	$3 24	$2 88
Do	do	1st..do	Austria	4 50	4 00
Do	do	2d ..do	do	4 05	3 60
Do	do	3d ..do	do	3 60	3 20
Do	do	4th..do	do	2 70	2 40
Do	young persons	1st..do	do	1 46	1 30
Do	do	2d ..do	do	1 24	1 10
Do	do	3d ..do	do	1 08	96
Do	do	4th..do	do	95	84
Spooling and warping:					
Women and girls		1st grade	Massachusetts	7 50	6 67
Do		2d ..do	do	7 38	6 56
Do		3d ..do	do	4 80	4 27
Do		4th..do	do	4 20	3 73
Men or women		1st..do	England	8 17	7 26
Do		2d ..do	do	7 08	6 29
Do		3d ..do	do	5 16	4 59
Do		4th..do	do	3 94	3 50
Do		5th..do	do	3 26	2 90
Men		1st..do	Germany	8 10	7 20
Do		2d ..do	do	6 48	5 76
Do		3d ..do	do	4 94	4 39
Do		4th..do	do	2 84	2 52
Women		1st..do	do	3 24	2 88
Do		2d ..do	do	2 41	2 14
Do		3d ..do	do	1 62	1 44
Young persons		1st..do	do	1 62	1 44
Do		2d ..do	do	1 35	1 20
Women			Prussia	2 03	1 80
Young persons		1st..do	Austria	1 35	1 20
Do		2d ..do	do	1 10	98
Do		3d ..do	do	90	80
Dressing.					
Men		1st grade	Massachusetts	12 75	11 33
Do		2d ..do	do	12 00	10 67
Do		3d ..do	do	10 07	8 95
Do		4th..do	do	9 50	8 50
Do		5th..do	do	9 00	8 00
Women			do	9 06	8 05
Men		1st..do	England	9 53	8 47
Do		2d ..do	do	8 17	7 26
Do		3d ..do	do	7 08	6 29
Do		4th..do	do	6 08	5 40
Do		5th..do	do	5 45	4 84
Do			Germany	2 84	2 52
Do		1st..do	Russia	2 43	2 16
Do		2d ..do	do	2 09	1 86
Do..or women		1st..do	Austria	1 71	1 52
Do	do	2d ..do	do	1 13	1 00
Weaving.					
Men and women		1st grade	Massachusetts	11 10	9 87
Do	do	2d ..do	do	9 90	8 80
Do	do	3d ..do	do	9 00	8 00
Do	do	4th..do	do	8 57	7 62
Do	do	5th..do	do	7 89	7 02
Do	do	6th..do	do	7 28	6 47
Do	do	7th..do	do	6 00	5 33

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872......	Standard gold,
Weaving—Continued.					
Girls			Massachusetts	$4 80	$4 27
Men		1st..do	England	6 54	5 81
Do		2d..do	do	5 45	4 84
Do		3d..do	do	4 08	3 63
Women		1st..do	do	4 91	4 36
Do		2d..do	do	3 87	3 44
Do		3d..do	do	3 13	2 78
Do		4th..do	do	2 86	2 54
Men		1st..do	Germany	8 10	7 20
Do		2d..do	do	6 48	5 76
Do		3d..do	do	4 86	4 32
Do		4th..do	do	4 13	3 67
Do		5th..do	do	3 24	2 88
Do		6th..do	do	2 50	2 22
Do		7th..do	do	1 62	1 44
Women		1st..do	do	4 05	3 60
Do		2d..do	do	3 24	2 88
Do		3d..do	do	2 77	2 46
Do		4th..do	do	2 05	1 82
Do		5th..do	do	1 62	1 44
Young persons		1st..do	Germany	2 84	2 52
Do		2d..do	do	2 03	1 80
Men		1st..do	Prussia	6 48	5 76
Do		2d..do	do	4 69	4 17
Do		3d..do	do	4 12	3 66
Do		4th..do	do	3 24	2 88
Men and women		1st..do	Austria	3 60	3 20
Do		2d..do	do	3 15	2 80
Do		3d..do	do	2 70	2 40
Do		4th..do	do	1 31	1 16
Fulling, Shearing, Gigging, Burling, Finishing and Packing.					
Fuiling	men	1st grade	Massachusetts	10 02	8 91
Do		2d..do	do	8 50	7 56
Do		3d..do	do	7 50	6 67
Do	women		do	8 22	7 31
Do	men	1st..grade	England	10 35	9 20
Do		2d..do	do	9 53	8 47
Do		3d..do	do	6 81	6 05
Do		4th..do	do	6 03	5 36
Do		5th..do	do	5 45	4 84
Do		6th..do	do	4 89	4 35
Do		1st..do	Germany	6 48	5 76
Do		2d..do	do	4 86	4 32
Do		3d..do	do	4 05	3 60
Do		4th..do	do	2 84	2 52
Do		5th..do	do	2 43	2 16
Do	young persons	1st..do	England	2 03	1 80
Do		2d..do	do	1 62	1 44
Do	men	1st..do	Prussia	3 24	2 88
Do		2d..do	do	2 93	2 60
Do		3d..do	do	2 59	2 30
Do			Austria	1 80	1 60
Do	women		do	1 13	1 00
Shearing	men	1st grade	Massachusetts	9 00	8 00
Do		2d..do	do	8 00	7 11
Do		3d..do	do	7 50	6 67
Do		4th..do	do	6 60	5 88

RATES OF WAGES—CONTINUED.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872.....	Standard gold.
Fulling, Shearing, &c—Continued.					
Shearing	boys	1st do	Massachusetts	$4 50	$4 00
Do		2d do	do	3 00	2 67
Gigging	men	1st do	do	10 02	8 91
Do		2d do	do	8 38	7 45
Do		3d do	do	7 50	6 67
Do		4th do	do	6 78	6 03
Do		1st do	England	6 81	6 05
Do		2d do	do	6 26	5 56
Do		3d do	do	4 89	4 35
Do	boys		do	3 24	2 88
Do	men		Germany	3 78	3 36
Burling	men		Massachusetts	8 56	7 61
Do	women and girls	1st grade	do	7 50	6 67
Do	do	2d do	do	6 56	5 83
Do	do	3d do	do	6 00	5 33
Do	do	4th do	do	5 22	4 64
Do	women	1st do	England	3 54	3 15
Do	do	2d do	do	2 86	2 54
Do	do	3d do	do	2 18	1 94
Do	do	4th do	do	1 36	1 21
Do	do	1st do	Germany	2 43	2 16
Do	do	2d do	do	2 16	1 92
Do	do	1st do	Prussia	3 24	2 88
Do	do	2d do	do	1 91	1 70
Do	do	3d do	do	1 44	1 28
Do	do	1st do	Austria	1 58	1 40
Do	do	2d do	do	1 13	1 00
Do	do	3d do	do	1 08	96
Finishing	men	1st do	Massachusetts	10 50	9 33
Do	do	2d do	do	9 56	8 50
Do	do	3d do	do	8 50	7 56
Do	do	4th do	do	7 38	6 56
Do	do	5th do	do	6 00	5 33
Do	women	1st do	do	7 50	6 67
Do	do	2d do	do	6 38	5 67
Do	do	3d do	do	5 09	4 52
Do	do	4th do	do	4 65	4 13
Do	do	5th do	do	4 02	3 57
Do	boys and girls	1st do	do	6 00	5 33
Do	do	2d do	do	5 40	4 80
Do	do	3d do	do	3 00	2 67
Do	men	1st do	Germany	4 05	3 60
Do	do	2d do	do	3 24	2 88
Do	women	1st do	do	2 84	2 52
Do	do	2d do	do	2 43	2 16
Packing	men		Massachusetts	9 00	8 00
Do	women		do	6 94	6 17
Do	men		Germany	3 24	2 88
Do	women		do	1 49	1 32
Repairing.					
Carpenters	men		Massachusetts	17 00	15 11
Do	do		England	8 99	7 99
Machinists, &c	do	1st grade	Massachusetts	16 50	14 67
Do	do	2d do	do	13 44	11 95
Do	do	3d do	do	12 00	10 67
Do	do	4th do	do	11 22	9 97

RATES OF WAGES—Continued.

OCCUPATIONS AND COUNTRIES.				AV'GE WEEKLY WAGES.	
				Standard U. S. paper dollar of 1872	Standard gold,
Repairing— Continued.					
Machinists, &c	men	1st grade	England	$8 99	$7 99
Do	do	2d do	do	8 17	7 26
Do	do	3d do	do	7 21	6 41
Do	do	4th do	do	6 26	5 56
Do	do	5th do	do	4 89	4 35
Do	do	1st do	Germany	5 67	5 04
Do	do	2d do	do	2 84	2 52
Watch, fire yard hands,	do	1st do	Massachusetts	13 50	12 00
Do	do	2d do	do	10 44	9 28
Do	do	3d do	do	9 00	8 00
Do	do	4th do	do	7 50	6 67
Firemen			do	11 22	9 97
Do		1st grade	England	5 72	5 08
Do		2d do	do	5 16	4 59
Men		1st do	do	6 81	6 05
Do		2d do	do	5 45	4 84
Engineers		1st do	do	9 80	8 71
Do		2d do	do	9 53	8 47
Do		3d do	do	5 45	4 84
Do		1st do	Germany	4 46	3 96
Firemen		1st do	do	3 24	2 88
Do		2d do	do	2 70	2 40
Do			Prussia	4 86	4 32
Do		1st do	Austria	4 28	3 80
Do		2d do	do	4 05	3 60
Do		3d do	do	2 48	2 20
General labor	men	1st do	Massachusetts	10 02	8 91
Do	do	2d do	do	9 00	8 00
Do	do	3d do	do	7 50	6 67
Do	do	1st do	England	6 54	5 81
Do	do	2d do	do	4 89	4 35
Do	do	3d do	do	4 35	3 87
Not admitting of comparison.					
Males in factories			Germany	4 55	4 04
Women	do		Prussia	3 94	3 50
Do	do		do	3 38	3 00
Children	do		do	2 25	2 00
Do	do		do	1 69	1 50
Operatives,	do		Austria	3 92	3 48
Do	do		do	3 24	2 88
Do	do		do	1 10	98
Do	do		do	97	86
Men	do		Italy	3 85	3 42
Do	do		do	2 45	2 18
Women	do		do	1 92	1 71

TABLE OF ARTICLES.

AVERAGE PRICES FOR PENNSYLVANIA.

The following table of prices of articles are given, that those who desire so to do may compare them with those given in the following table. Except coal and rent, they are all made up from the statements of respectable dealers, and are intended to represent average retail prices for the years mentioned, over the State. Coal and rent are estimated upon the best data available.

ARTICLES.	Prices, 1872.	Measure...	Quantity for $1, 1872...	Prices, 1875.	Measure...	Quantity for $1, 1875...
Flour, wheat, superfine, ℘ barrel	$10 75	℔s.	18.25	$6 25	℔s.	31.34
Beef, fresh roasting pieces, ℘ ℔	17	“	5.88	16	“	6.25
“ soup pieces do	13	“	8.33	11	“	9.09
“ rump steaks do	16	“	6.25	15	“	6.66
Veal, fore quarters do	9	“	11.11	9	“	11.11
Mutton, fore quarters do	14	“	7.14	14	“	7.14
“ chops do	18	“	5.55	18	“	5.55
Pork, fresh do	12	“	8.33	15	“	6.66
“ hams, smoked do	15	“	6.66	15	“	6.66
Lard do	14	“	7.14	16	“	6.25
Butter do	35	“	2.86	30	“	3.33
Cheese do	20	“	5.	22	“	4.55
Potatoes, old, ℘ bushel	1 10	peck,	3.64	1 00	peck.	4.
Rice, ℘ ℔	10	℔s.	10.00	10	℔s.	10.
Milk, ℘ quart	8	qts.	12.50	10	qts.	10.
Eggs, ℘ dozen	30	doz.	....	30	doz.	3.33
Tea, Oolong or good Black, ℘ ℔	1 25	℔s.	.80	90	℔s.	1.39
Coffee, Rio, roasted do	32	“	3.12	30	“	3.33
Soap, common do	8	“	12.50	8	“	12.50
Sugar, good brown do	10	“	10.	10	“	10.
Starch do	11	“	9.09	11	“	9.09
Fuel, coal, anthracite ℘ ton, Philadel'a.	6 50	bush.	3.85	6 00	bush.	4.17
“ do do Harrisburg,	5 50	“	4.54	5 00	“	5.
“ do do Coal regions,	2 00	“	8.33	2 75	“	9.09
“ coal, bit'us ℘ ton, avg. where used,	2 75	“	9.09	2 50	“	10.
Shirtings, brown 4-4, ℘ yard	14½	yds.	6.89	10	yds.	10.
“ brown 9-8 do	17½	“	5.71	11½	“	6.89
Prints, Merimac or common, ℘ yard	11½	“	6.89	9½	“	10.50
Boots, men's heavy, ℘ pair	5 00	pairs.	.20	4 50	pairs.	.22
Rent, four rooms, tenements, ℘ month, in towns	10 00	days.	3.	9 00	days.	3.33
“ four rooms, tenements, ℘ month, in country	5 00	“	6.	4 50	“	6.66
“ six rooms, tenements, ℘ month, in towns	13 00	“	2.31	12 00	“	2.50
“ six rooms, tenements, ℘ month, in country	9 00	“	3.83	8 00	“	3.75
Board, for workmen, ℘ week	5 00	“	1.40	4 00	“	1.75
“ women in factories, ℘ week	3 00	“	2.33	2 50	“	2.80

[From Massachusetts Report.]

TABLE II.—GROUP 1—FLOUR (WHEAT, SUPERFINE.)

LOCATION.	No. of pounds for one dollar.	LOCATION.	No. of pounds for one dollar.
Boston ..... Mass	20.83	Aix-la-Chapelle ..... Prussia	17.39
Towns in ..... do	16.34	Dusseldorf ..... do	16.39
Manchester ..... England	22.22	Elberfeld ..... do	24.39
Birmingham ..... do	20.41	Barmen ..... do	17.37
Sheffield ..... do	22.22	Dantzic ..... do	17.24
Bradford ..... do	18.86	Frankfort-on-the-Main	13.51
Huddersfield ..... do	21.74	Trieste ..... Austria	14.71
Halifax ..... do	21.74	Charleroi ..... Belgium	21.28
Leeds ..... do	20.83	Copenhagen ..... Denmark	23.47
Newcastle-on-Tyne ..... do	21.74	Elsinore ..... do	22.72
Sunderland ..... do	20.41	Chaux-de-Fonds ..... Switzerl'd	17.86
Leith ..... Scotland	22.73	Basle ..... do	17.42
Portland ..... Ireland	19.23	Zurich ..... do	12.66
Pontypool ..... Wales	19.60	Palermo ..... Italy	8.89
Cardiff ..... do	19.60	Nice ..... France	14.49
Stuttgard ..... Wirtemb'g	20	Lyons ..... do	20.41
Munich ..... Bavaria	14.28	Marseilles ..... do	11.11
Berlin ..... Prussia	19.21	Odessa ..... Russia	20.41
Cologne ..... do	16.95	Tunis ..... Africa	21.74

GROUP 2—BEEF, (FRESH, ROASTING PIECE.)

LOCATION.	No. of pounds for one dollar.	LOCATION.	No. of pounds for one dollar.
Boston ..... Mass	5.56	Huddersfield ..... England	4.44
Towns in ..... do	5.	Leeds ..... do	4.44
Manchester ..... England	4.04	Newcastle-on-Tyne ..... do	4.26
Birmingham ..... do	4.26	Sunderland ..... do	4.26
Sheffield ..... do	4.44	Dundee ..... Scotland	4.21
Bradford ..... do	3.88	Leith ..... do	3.88
Portlow ..... Ireland	4.94	Vienna ..... Austria	4.55
Londonderry ..... do	4.44	Antwerp ..... Belgium	4.83
Pontypool ..... Wales	4.44	Charleroi ..... do	4.94
Cardiff ..... do	4.44	Copenhagen ..... Denmark	7.55
Chemnitz ..... Saxony	6.35	Elsinore ..... do	8.89
Dresden ..... do	6.90	Chaux-de-Fonds ..... Switzerl'd.	4.94
Stuttgard ..... Wirtemb'g	5.26	Basle ..... do	6.56
Munich ..... Bavaria	5.26	Zurich ..... do	4.94
Berlin ..... Prussia	5.41	Palermo ..... Italy	2.96
Aix-la-Chapelle ..... do	5.13	Messina ..... do	3.28
Dusseldorf ..... do	4.70	Nice ..... France	4.65
Elberfeld ..... do	3.70	Lyons ..... do	9.76
Barmen ..... do	5.56	Marseilles ..... do	4.94
Dantzic ..... do	5.97	Odessa ..... Russia	8.89
Frankfort-on-the-Main	5.56	Tunis ..... Africa	6.35
Trieste ..... Austria	3.17		

GROUP 3.—BEEF, (SOUP PIECES.)

LOCATION.	No. of pounds for one dollar.	LOCATION.	No. of pounds for one dollar.
Boston ..... Mass	14.29	Aix-la-Chapelle ..... Prussia	5.13
Towns in ..... do	12.50	Dusseldorf ..... do	6.35
Manchester ..... England	8.89	Elberfeld ..... do	5.26
Birmingham ..... do	7.41	Barmen ..... do	5.56
Sheffield ..... do	5.56	Dantzic ..... do	7.41
Bradford ..... do	5.26	Frankfort-on-the-Main	5.56
Huddersfield ..... do	8.16	Trieste, ... Austria	4.04
Newcastle-on-Tyne ..... do	4.94	Vienna ..... do	4.82
Sunderland ..... do	5.26	Antwerp ..... Belgium	5.56
Dundee ..... Scotland	4.94	Charleroi ..... do	4.94
Leith ..... do	4.70	Copenhagen ..... Denmark	9.52
Portlaw ..... Ireland	6.35	Elsinore ..... do	10.81
Londonderry ..... do	6.35	Chaux-de-Fonds ..... Switzerl'd	4.94
Pontypool ..... Wales	5.56	Zurich ..... do	4.94

GROUP 3.—BEEF, (SOUP PIECES)—*Continued.*

LOCATIONS.		No. of pounds for one dollar,	LOCATIONS.		No. of pounds for one dollar,
Cardiff	do	5.56	Palermo	Italy	3.57
Chemnitz	Saxony	6.67	Messina	do	4.94
Dresden	do	8.89	Nice	France	4.65
Stuttgard	Wirtemb'g,	6.15	Marseilles	do	5.56
Munich	Bavaria	7.41	Odessa	Russia	12.90
Berlin	Prussia	6.90	Tunis	Africa	6.35

GROUP 4.—BEEF, (RUMP STEAKS.)

Boston	Mass	3.67	Leeds	England	2.96
Towns in	do	3.12	Newcastle-on-Tyne	do	4.04
Manchester	England	3.70	Sunderland	do	3.70
Birmingham	do	3.41	Dundee	Scotland	2.96
Sheffield	do	3.17	Leith	do	2.96
Bradford	do	3.17	Portlaw	Ireland	4.70
Huddersfield	do	3.41	Londonderry	do	3.70
Pontypool	Wales	4.04	Vienna	Austria	4.44
Cardiff	do	4.04	Antwerp	Belgium	4.82
Chemnitz	Saxony	5.88	Charleroi	do	4.94
Dresden	do	5.26	Copenhagen	Denmark	7.41
Stuttgard	Wirtemb'g	5.97	Chaux-de-Fonds	Switzerl'd	4.94
Munich	Bavaria	6.90	Basle	do	7.14
Berlin	Prussia	3.88	Zurich	Italy	4.94
Aix-la-Chapelle	do	4.08	Palermo	do	2.96
Dusseldorf	do	2.96	Messina	France	3.28
Elberfeld	do	2.88	Nice	do	4.44
Barmen	do	4.94	Marseilles	Russia	4.21
Dantzic	do	4.65	Odessa	Russia	8.89
Frankfort-on-the-Main		4.21	Tunis	Africa	6.35
Trieste	Austria	3.67			

GROUP 5.—VEAL. (FOREQUARTERS.)

Boston	Mass	10.81	Dusseldorf	Prussia	6.90
Towns in	do	8.70	Elberfeld	do	5.56
Manchester	England	5.26	Barmen	do	5.97
Birmingham	do	5.56	Dantzic	do	6.56
Sheffield	do	4.94	Frankfort-on-the-Main		5.41
Bradford	do	5.26	Trieste	Austria	3.17
Huddersfield	do	5.56	Vienna	do	3.96
Halifax	do	4.26	Antwerp	Belgium	5.97
Newcastle-on-Tyne	do	4.94	Charleroi	do	4.94
Sunderland	do	4.44	Copenhagen	Denmark	8.51
Dundee	Scotland	5.56	Elsinore	do	13.79
Leith	do	4.94	Chaux-de-Fonds	Switzerl'd	5.56
Pontypool	Wales	4.94	Basle	do	5.71
Cardiff	do	4.94	Zurich	do	4.26
Chemnitz	Saxony	8.89	Palermo	Italy	3.57
Dresden	do	8.51	Messina	do	3.30
Stuttgard	Wirtemb'g	6.15	Nice	France	4.65
Munich	Bavaria	8.16	Lyons	do	9.76
Berlin	Prussia	7.14	Marseilles	do	3.70
Cologne	do	5.56	Odessa	Russia	11.11
Aix-la-Chapelle	do	5.63	Tunis	Africa	6.35

Group 6—Mutton (Forequarters.)

LOCATIONS.	No. of pounds for one dollar,	LOCATIONS,	No. of pounds for one dollar,
Boston ... Mass	12.50	Leeds ... England	4.94
Towns in ... do	8.	Newcastle-on-Tyne ... do	5.56
Manchester ... England	4.94	Sunderland ... do	4.70
Birmingham ... do	5.56	Dundee ... Scotland	4.44
Sheffield ... do	5.56	Leith ... do	5.56
Bradford ... do	4.94	Portlaw ... Ireland	5.26
Huddersfield ... do	5.56	Londonderry ... do	4.44
Pontypool ... Wales	4.94	Vienna ... Austria	6.25
Cardiff ... do	4.94	Antwerp ... Belgium	5.26
Chemnitz ... Saxony	7.41	Charleroi ... do	3.70
Dresden ... do	5.41	Copenhagen ... Denmark	8.51
Stuttgard ... Wirtemb'g	7.41	Elsinore ... do	8.89
Munich ... Bavaria	8.89	Chaux-de-Fonds ... Switzerl'd	4.94
Berlin ... Prussia	7.41	Basle ... do	6.15
Cologne ... do	5.56	Zurich ... do	6.35
Aix-la-Chapelle ... do	5.13	Palermo ... Italy	4.44
Dusseldorf ... do	4.70	Nice ... France	4.65
Elberfeld ... do	4.70	Lyons ... do	9.76
Barmen ... do	5.97	Marseilles ... do	4.04
Dantzic ... do	7.41	Odessa ... Russia	12.90
Frankfort-on-the-main	4.94	Tunis ... Africa	8.89
Trieste ... Austria	7.41		

Group 7—Mutton (Chops)

LOCATIONS.	No. of pounds for one dollar,	LOCATIONS,	No. of pounds for one dollar,
Boston ... Mass	7.14	Dusseldorf ... Prussia	4.65
Towns in ... do	6.06	Elberfeld ... do	4.65
Manchester ... England	3.70	Barmen ... do	5.88
Birmingham ... do	3.70	Dantzic ... do	6.35
Sheffield ... do	4.26	Frankfort-on-the-Main	3.70
Bradford ... do	3.70	Trieste ... Austria	6.35
Huddersfield ... do	3.70	Vienna ... do	4.30
Leeds ... do	4.44	Antwerp ... Belgium	5.56
Newcastle-on-Tyne ... England	4.04	Charleroi ... Belgium	3.70
Sunderland ... do	3.70	Copenhagen ... Denmark	7.41
Dundee ... Scotland	4.44	Elsinore ... do	7.02
Leith ... do	3.70	Chaux-de-Fonds ... Switzerl'nd	4.94
Portlaw ... Ireland	4.94	Basle ... do	6.15
Londonderry ... do	3.70	Zurich ... do	6.35
Pontypool ... Wales	4.04	Palermo ... Italy	4.44
Cardiff ... do	4.44	Nice ... France	3.70
Chemnitz ... Saxony	6.35	Lyons ... do	7.14
Dresden ... do	7.41	Marseilles ... do	4.04
Munich ... Bavaria	8.89	Odessa ... Russia	8.89
Berlin ... Prussia	5.80	Tunis ... Africa	6.35
Cologne ... do	4.70		

Group 8.—Pork (Fresh.)

LOCATIONS.	No. of pounds for one dollar,	LOCATIONS,	No. of pounds for one dollar,
Boston ... Mass	8.70	Newcastle-on-Tyne ... England	5.56
Towns in ... do	7.41	Sunderland ... do	4.94
Manchester ... England	5.56	Dundee ... Scotland	5.56
Birmingham ... do	5.56	Leith ... do	5.56
Sheffield ... do	4.94	Portlaw ... Ireland	6.90
Bradford ... do	5.56	Pontypool ... Wales	5.26
Huddersfield ... do	5.56	Cardiff ... do	4.94
Chemnitz ... Saxony	5.97	Vienna ... Austria	4.04
Dressden ... do	5.97	Antwerp ... Belgium	4.82

GROUP 8—*Continued.*

LOCATIONS.		No. of pounds for one dollar,	LOCATIONS.		No. of pounds for one dollar,
Stuttgard	Wirtemb'g	5.71	Charleroi	Belgium	5.06
Munich	Bavaria	5.13	Copenhagen	Denmark	11.11
Berlin	Prussia	6.15	Elsinore	do	10.
Cologne	do	4.17	Chaux-de-Fonds	Switzerl'd	4.04
Aix-la-Chapelle	do	4.40	Basle	do	6.15
Dusseldorf	do	4.70	Zurich	do	5.26
Elberfeld	do	4.65	Palermo	Italy	4.44
Barmen	do	4.44	Nice	France	4.65
Dantzic	do	7.41	Lyons	do	9.76
Frankfort-on-the-Main		5.56	Marseilles	do	4.70
Trieste	Austria	4.44	Odessa	Russia	8.89

GROUP 9—PORK, (HAMS, SMOKED.)

Boston	Mass	7.69	Cologne	Prussia	2.70
Towns in	do	7.14	Aix-la-Chapelle	do	3.23
Manchester	England	3.17	Dusseldorf	do	3.88
Birmingham	do	3.70	Elberfeld	do	3.07
Sheffield	do	4.44	Barmen	do	3.70
Bradford	do	4.04	Dantzic	do	3.17
Huddersfield	do	3.70	Frankfort-on-the-Main		3.70
Leeds	do	4.04	Trieste	Austria	1.76
Newcastle-on-Tyne	do	3.70	Antwerp	Belgium	3.57
Sunderland	do	3.88	Charleroi	do	2.34
Dundee	Scotland	3.41	Copenhagen	Denmark	6.45
Leith	do	3.17	Elsinore	do	5.97
Portlaw	Ireland	3.41	Chaux-de-Fonds	Switzerl 'd,	3.57
Londonderry	do	3.70	Zurich	do	3.17
Cardiff	Wales	5.26	Palermo	Italy	2.55
Chemnitz	Saxony	4.44	Messina	do	2.96
Dresden	do	4.70	Nice	France	2.96
Stuttgard	Wirtemb'g	1.85	Lyons	do	4.94
Munich	Bavaria	2.77	Marseilles	do	1.76
Berlin	Prussia	4.35	Odessa	Russia	5.97

GROUP 10—LARD.

Boston	Mass	8.33	Sunderland	England	4.44
Towns in	do	7.55	Dundee	Scotland	5.56
Manchester	England	6.67	Leith	do	4.44
Birmingham	do	5.56	Portlow	Ireland	7.41
Sheffield	do	4.94	Londonderry	do	4.44
Bradford	do	5.26	Pontypool	Wales	5.56
Huddersfield	do	5.56	Cardiff	do	4.44
Halifax	do	7.41	Chemnitz	Saxony	4.08
Leeds	do	5.26	Dresden	do	6.90
Newcastle-on-Tyne	do	4.44	Stuttgard	Wirtemb'g,	4.94
Munich	Bavaria	3.70	Chaleroi	Belgium	4.65
Berlin	Prussia	4.70	Copenhagen	Denmark	6.90
Cologne	do	4.26	Elsinore	do	4.94
Aix-la-Capelle	do	3.88	Chaux-de-Fonds	Switzerl'd	3.17
Dusseldorf	do	4.26	Basle	do	6.56
Elberfeld	do	4.44	Zurick	do	5.56
Barmen	do	4.21	Palermo	Italy	2.22
Dantzic	no	4.26	Nice	France	4.65
Frankfort-on-the-Main		4.94	Lyons	do	8.89
Trieste	Austria	3.70	Marseilles	do	3.57
Vienna	do	3.67	Odessa	Russia	5.26
Antwerp	Belgium	4.44			

Group 11—Butter.

LOCATIONS.		No. of pounds for one dollar,	LOCATIONS.		No. of pounds for one dollar,
Boston	Mass	2.59	Cologne	Prussia	2.96
Towns in	do	2.50	Aix-la-Chapelle	do	3.77
Manchester	England	3.41	Dusseldorf	do	2.96
Birmingham	do	3.17	Elberfeld	do	3.70
Sheffield	do	3.70	Barmen	do	2.47
Bradford	do	3.17	Dantzic	do	2.92
Huddersfield	do	2.96	Frankfort-on-the-Main		2.53
Halifax	do	3.17	Trieste	Austria	2.34
Leeds	do	2.77	Antwerp	Belgium	2.74
Newcastle-on-Tyne	do	3.17	Charleroi	do	2.61
Sunderland	do	3.33	Copenhagen	Denmark	3.81
Dundee	Scotland	2.96	Elsinore	do	4.40
Leith	do	3.17	Chaux-de-Fonds	Switzerl'd	3.05
Portlaw	Ireland	3.70	Basle	do	4.44
Londonderry	do	3.70	Zurich	do	2.96
Pontypool	Wales	3.70	Palermo	Italy	1.49
Cardiff	do	3.17	Nice	France	2.39
Dresden	Saxony	3.30	Lyons	do	2.96
Stuttgard	Wirtemb'g	3.88	Marseilles	do	3.17
Munich	Bavaria	5.13	Odessa	Russia	3.57
Berlin	Prussia	3.28	Tunis	Africa	1.76

Group 12—Cheese.

Boston	Mass	6.06	Sunderland	England	4.94
Towns in	do	5.41	Dundee	Scotland	5.56
Manchester	England	5.36	Leith	do	4.44
Birmingham	do	4.94	Portlaw	Ireland	4.44
Sheffield	do	5.26	Londonderry	do	4.44
Bradford	do	5.26	Pontypool	Wales	5.56
Huddersfield	do	5.56	Chemnitz	Saxony	11.11
Halifax	do	5.26	Dresden	do	4.94
Leeds	do	4.94	Stuttgard	Wirtemb'g	16.67
Newcastle-on-Tyne	do	4.94	Munich	Bavaria	3.41
Berlin	Prussia	19.04	Elsinore	Denmark	10.81
Cologne	do	9.52	Chaux-de-Fonds	Switzerl'd	4.65
Aix-la-Chapelle	do	4.35	Basle	do	5.71
Dusseldorf	do	4.70	Zurich	do	4.44
Elberfeld	do	8.89	Palermo	Italy	3.17
Barmen	do	4.26	Messina	do	2.77
Dantzic	do	4.26	Nice	France,	2.96
Frankfort-on-the-Main		4.04	Lyons	do	3.57
Trieste	Austria	2.07	Marseilles	do	4.04
Antwerp	Belgium	4.65	Odessa	Russia	2.22
Charleroi	do	3.88	Tunis	Africa	2.41
Copenhagen	Denmark	8.51			

Group 13—Potatoes, (Old.)

		pecks.			pecks.
Boston	Mass	3.85	Aix-la-Chapelle	Prussia	4.95
Towns in	do	4.	Elberfeld	do	7.72
Manchester	England	2.97	Barmen	do	5.97
Birmingham	do	2.97	Dantzic	do	13.68
Sheffield	do	3.28	Frankfort-on-the-Main		7.14
Bradford	do	3.70	Triests	Austria	3.57
Halifax	do	2.97	Antwerp	Belgium	7.93
Leeds	do	2.97	Copenhagen	Denmark	9.43
Sunderland	do	5.26	Elsinore	do	11.85

GROUP 13—*Continued.*

LOCATION.		No. of pecks for one dollar,	LOCATION.		No. of pecks for one dollar,
Dundee	Scotland	1.83	Chaux-de-Fonds	Switzerl'd	7.11
Leith	do	3.05	Basle	do	3.70
Portlaw	Ireland	6.89	Zurich	do	5.88
Londonderry	do	8.29	Palermo	Italy	1.49
Cardiff	Wales	2.96	Nice	France	1.49
Dresden	Saxony	10.96	Lyons	do	13.12
Stuttgard	Wirtemb'g,	5.56	Marseilles	do	5.88
Munich	Bavaria	7.41	Odessa	Russia	3.85
Berlin	Prussia	6.25	Tunis	Africa	2.86
Cologne	do	7.41			

GROUP 14—RICE.

		℔s.			℔s.
Boston	Mass	9.52	Birmingham	England	14.81
Towns in	do	8.33	Sheffield	do	22.22
Manchester	England	14.81	Bradford	do	11.11
Huddersfield	do	14.81	Barmen	Prussia	14.81
Halifax	do	22.22	Dantzic	do	10.
Newcastle-on-Tyne	do	22.22	Frankfort-on-the-Main		10.53
Sunderland	do	11.11	Trieste	Austria	11.76
Dundee	Scotland	14.81	Antwerp	Belgium	19.04
Leith	do	19.04	Charleroi	do	12.90
Portlaw	Ireland	19.04	Copenhagen	Denmark	14.29
Pontypool	Wales	22.22	Elsinore	do	14.29
Cardiff	do	19.04	Chaux-de-Fonds	Switzerl'd	14.81
Chemnitz	Saxony	22.22	Basle	do	19.04
Dresden	do	14.81	Zurich	do	14.81
Stuttgard	Wirtemb'g,	11.11	Palermo	Italy	8.89
Munich	Bavaria	11.11	Messina	do	12.90
Berlin	Prussia	6.90	Nice	France	12.90
Cologne	do	19.04	Lyons	do	12.90
Aix-la-Chapelle	do	20.	Marseilles	do	17.37
Dusseldorf	do	10.	Odessa	Russia	17.37
Elberfeld	do	19.04			

GROUP 15—MILK.

		quarts.			quarts.
Boston	Mass	11.76	Aix-la-Chapelle	Prussia	20.
Towns in	do	13.33	Dusseldorf	do	19.04
Manchester	England	12.90	Elberfeld	do	28.57
Birmingham	do	14.81	Barmen	do	14.81
Sheffield	do	14.81	Dantzic	do	25.
Bradford	do	11.11	Frankfort-on-the-Main		22.22
Huddersfield	do	14.81	Trieste	Austria	11.11
Halifax	do	14.81	Antwerp	Belgium	28.57
Newcastle-on-Tyne	do	11.11	Charleroi	do	22.22
Sunderland	do	8.89	Copenhagen	Denmark	33.33
Dundee	Scotland	7.41	Elsinore	do	33.33
Leith	do	12.90	Chaux-de-Fonds	Switzerl'd	16.
Portlaw	Ireland	22.22	Basle	do	28.57
Londonderry	do	19.04	Zurich	do	30.77
Pontypool	Wales	22.22	Palermo	Italy	4.44
Cardiff	do	12.90	Messina	do	5.19
Chemnitz	Saxony	19.04	Nice	France	14.81
Dresden	do	19.04	Lyons	do	4.70
Stuttgard	Wirtemb'g	22.22	Marseilles	do	12.90
Munich	Bavaria	22.22	Odessa	Russia	8.89
Berlin	Prussia	25.	Tunis	Africa	14.81
Cologne	do	22.22			

GROUP 16—EGGS.

LOCATIONS.		No. of dozens for one dollar.	LOCATIONS.		No. of dozens for one dollar.
Boston	Mass.	3.33	Cologne	Prussia	6.67
Towns in	do	3.33	Aix-la-Chapelle	do	4.88
Manchester	England	3.88	Dusseldorf	do	4.21
Birmingham	do	4.44	Elberfeld	do	4.70
Sheffield	do	4.94	Barmen	do	4.26
Bradford	do	4.94	Dantzic	do	8.89
Huddersfield	do	4.04	Frankfort-on-the-Main		4.44
Leeds	do	3.70	Trieste	Austria	6.56
Newcastle-on-Tyne	do	4.04	Antwerp	Belgium	3.17
Sunderland	do	3.17	Charleroi	do	3.88
Dundee	Scotland	2.96	Copenhagen	Denmark	7.41
Leith	do	3.17	Elsinor	do	7.02
Portlaw	Ireland	4.94	Chaux-de-Fonds	Switzerl'd	4.65
Londonderry	do	3.70	Basle	do	6.78
Pontypool	Wales	4.44	Zurich	do	4.44
Cardiff	do	4.44	Palermo	Italy	2.47
Chemnitz	Saxony	6.06	Nice	France	4.94
Dresden	do	6.90	Lyons	do	3.70
Stuttgard	Wirtemb'g	5.56	Marseilles	do	3.88
Munich	Bavaria	5.56	Odessa	Russia	7.41
Berlin	Prussia	7.14	Tunis	Africa	4.94

GROUP 17—TEA, (OOLONG OR GOOD BLACK.)

		pounds			pounds
Boston	Mass.	1.59	Cologne	Prussia	1.23
Towns in	do	1.33	Aix-la-Chapelle	do	1.19
Manchester	England	1.23	Dusseldorf	do	1.23
Birmingham	do	1.49	Elberfeld	do	1.03
Sheffield	do	1.49	Barmen	do	.82
Bradford	do	1.49	Dantzic	do	1.08
Huddersfield	do	1.23	Frankfort-on-the-Main		1.01
Halifax	do	1.49	Trieste	Austria	1.11
Leeds	do	1.35	Antwerp	Belgium	1.06
Newcastle-on-Tyne	do	1.23	Charleroi	do	1.18
Sunderland	do	1.06	Copenhagen	Denmark	1.89
Dundee	Scotland	1.35	Elsinore	do	1.65
Leith	do	1.49	Chaux-de-Fonds	Switzerl'd	.89
Portlaw	Ireland	1.23	Basle	do	.74
Londonderry	do	1.06	Zurich	do	.89
Pontypool	Wales	1.49	Palermo	Italy	.59
Cardiff	do	1.23	Messina	do	.74
Chemnitz	Saxony	.89	Nice	France	.83
Dresden	do	1.67	Lyons	do	1.11
Stuttgard	Wirtemb'g	.72	Marseilles	do	.88
Munich	Bavaria	1.11	Odessa	Russia	.88
Berlin	Prussia	.82	Tunis	Africa	.44

GROUP 18—COFFEE, (RIO, ROASTED.)

Boston	Mass.	2.50	Cologne	Prussia	3.30
Towns in	do	2.22	Aix-la-Chapelle	do	2.77
Manchester	England	2.77	Dusseldorf	do	2.70
Birmingham	do	2.47	Elberfeld	do	2.55
Sheffield	do	2.77	Barmen	do	2.34
Bradford	do	2.47	Dantzic	do	3.17
Huddersfield	do	2.96	Frankfort-on-the-Main		2.53
Leeds	do	2.77	Trieste	Austria	2.22
Newcastle-on-Tyne	do	3.17	Antwerp	Belgium	2.77

GROUP 18—COFFEE, (RIO, ROASTED.)—*Continued.*

LOCATIONS.	No. of pounds for one dollar.	LOCATIONS.	No. of pounds for one dollar,
Sunderland ... England	2.61	Charleroi ... Belgium	3.28
Dundee ... Scotland	2.47	Elsinore ... Denmark	3.05
Leith ... do	2.77	Chaux-de-Fonds ... Switzerl'd	3.70
Portlaw ... Ireland	2.22	Zurich ... do	2.96
Londonderry ... do	2.77	Palermo ... Italy	2.22
Pontypool ... Wales	2.22	Messina ... do	2.00
Chemnitz ... Saxony	2.77	Nice ... France	1.76
Dresden ... do	3.17	Lyons ... do	3.17
Stuttgard ... Wiremb'g	1.85	Marseilles ... do	1.76
Munich ... Bavaria	2.88	Odessa ... Prussia	2.96
Berlin ... Prussia	2.77	Tunis ... Africa	2.22

GROUP 19—SUGAR, (GOOD BROWN.)

Boston ... Mass.	10.53	Munich ... Bavaria	11.11
Towns in ... do	9.09	Cologne ... Prussia	6.35
Manchester ... England	11.11	Aix-la-Chapelle ... do	4.88
Birmingham ... do	11.11	Barmen ... do	5.56
Sheffield ... do	12.90	Dantzic ... do	8.00
Bradford ... do	10.00	Frankfork-on-the-Main	5.56
Huddersfield ... do	11.11	Trieste ... Austria	7.41
Leeds ... do	12.90	Antwerp ... Belgium	6.15
Newcastle-on-Tyne ... do	12.90	Elsinore ... Denmark	9.76
Sunderland ... do	11.11	Chaux-de-Fonds ... Switzerl'd	8.16
Dundee ... Scotland	11.76	Basle ... do	6.56
Leith ... do	10.00	Zurich ... do	6.35
Portlaw ... Ireland	12.90	Palermo ... Italy	5.97
Londonderry ... do	12.90	Messina ... do	7.41
Pontypool ... Wales	12.90	Nice ... France	6.35
Cardiff ... do	11.11	Lyons ... do	4.44
Chemnitz ... Saxony	8.16	Marseilles ... do	6.35
Dresden ... do	11.11	Odessa ... Russia	10.00
Stuttgard ... Wittemb'g	7.41	Tunis ... Africa	4.70

GROUP 20—SOAP, (COMMON.)

Boston ... Mass.	14.29	Birmingham ... England	14.81
Towns in ... do	11.11	Sheffield ... do	14.81
Manchester ... England	12.90	Bradford ... do	12.90
Huddersfield ... do	11.11	Barmen ... Prussia	12.90
Halifax ... do	12.90	Dantzic ... do	8.51
Leeds ... do	11.11	Frankfort-on-the-Main	8.89
Newcastle-on-Tyne ... do	11.11	Trieste ... Austria	10.
Sunderland ... do	11.11	Antwerp ... Belgium	7.41
Dundee ... Scotland	11.11	Charleroi ... do	22.22
Leith ... do	11.11	Copenhagen ... Denmark	12.50
Portlaw ... Ireland	12.90	Elsinore ... do	13.79
Londonderry ... do	14.81	Chaux-de-Fonds ... Switzerl'd	9.76
Pontypool ... Wales	14.81	Basle ... do	10.53
Cardiff ... do	12.90	Zurich ... do	12.90
Chemnitz ... Saxony	12.12	Palermo ... Italy	10.
Dresden ... do	12.90	Messina ... do	8.16
Stuttgard ... Wirtemb'g	8.89	Nice ... France	5.56
Munich ... Bavaria	8.89	Lyons ... do	22.22
Berlin ... Prussia	7.14	Marseilles ... do	11.11
Aix-la-Chapelle ... do	16.	Odessa ... Russia	12.90
Dusseldorf ... do	14.81	Tunis ... Africa	8.89
Elberfeld ... do	14.81		

Group 21—Starch.

LOCATIONS.		No. of pounds for one dollar,	LOCATIONS.		No. of pounds for one dollar,
Boston	Mass	10.	Aix-la-Chapelle	Prussia	8.
Towns in	do	6.90	Dusseldorf	do	6.35
Manchester	England	8.89	Elberfeld	do	7.41
Birmingham	do	8.89	Barmen	do	7.41
Sheffield	do	8.89	Dantzic	do	6.35
Bradford	do	6.35	Frankfort-on-the-Main		10.53
Huddersfield	do	7.41	Trieste	Austria	2.22
Newcastle-on-Tyne	do	7.41	Charleroi	Belgium	8.89
Sunderland	do	6.35	Copenhagen	Denmark	9.30
Dundee	Scotland	4.04	Elsinore	do	6.56
Leith	do	6.35	Chaux-de-Fonds	Switzerl'd	6.35
Portlaw	Ireland	14.81	Basle	do	10.53
Londonderry	do	10.	Zurich	do	11.11
Pontypool	Wales	8.89	Palermo	Italy	5.97
Cardiff	do	8.16	Messina	do	6.78
Chemnitz	Saxony	13.79	Nice	France	9.76
Dresden	do	14.81	Lyons	do	8.89
Stuttgard	Wirtemb'g	7.41	Marseilles	do	10.
Munich	Bavaria	7.41	Odessa	Russia	10.
Berlin	Prussia	8.89	Tunis	Africa	7.41

Group 22—Fuel, (Coal.)

		bushels			bushels
Boston	Mass	3.54	Munich	Bavaria	4.10
Towns in	do	2.39	Berlin	Prussia	3.56
Manchester	England	5.88	Aix-la-Chapelle	do	3.86
Birmingham	do	4.90	Dusseldorf	do	5.26
Sheffield	do	6.09	Dantzic	do	3.23
Bradford	do	5.26	Frankfort-on-the-Main		2.82
Huddersfield	do	6.67	Trieste	Austria	1.59
Leeds	do	4.20	Antwerp	Belgium	2.56
Newcastle-on-Tyne	do	3.52	Charleroi	do	4.17
Sunderland	do	5.56	Copenhagen	Denmark	2.94
Dundee	Scotland	3.52	Elsinore	do	3.03
Leith	do	3.52	Zurich	Switzerl'd	2.38
Portlaw	Ireland	2.94	Nice	France	2.13
Londonderry	do	3.21	Marseilles	do	3.44
Cardiff	Wales	3.14	Odessa	Russia	1.75
Stuttgard	Wirtemb'g	2.44	Tunis	Africa	.97

Group 23—Shirtings, (Brown, $\frac{4}{4}$)

		yards			yards
Boston	Mass	7.69	Cologne	Prussia	13.79
Towns in	do	7.69	Aix-la-Chapelle	do	8.51
Manchester	England	6.67	Dusseldorf	do	8.
Birmingham	do	8.89	Elberfeld	do	8.89
Sheffield	do	8.89	Barmen	do	6.90
Bradford	do	6.35	Frankfort-on-the-Main		6.35
Huddersfield	do	7.41	Trieste	Austria	7.14
Newcastle-on-Tyne	do	10.	Charleroi	Belgium	8.89
Sunderland	do	8.89	Copenhagen	Denmark	7.41
Leith	Scotland	8.89	Elsinore	do	4.94
Portlaw	Ireland	9.76	Chaux-de-Fonds	Switzerl'd	3.07
Londonderry	do	8.16	Basle	do	3.96
Pontypool	Wales	8.16	Zurich	do	3.70

GROUP 23—*Continued.*

LOCATIONS.		No. of yards for one dollar . . .	LOCATIONS.		No. of yards for one dollar . . .
Cardiff	Wales	8.16	Messina	Italy	6.15
Dresden	Saxony	12.90	Nice	France	3.70
Stuttgard	Wirtemb'g	8.89	Lyons	do	8.89
Munich	Bavaria	8.16	Marseilles	do	5.97
Berlin	Prussia	8.16	Odessa	Russia	4.44

GROUP 24—SHEETINGS, (BROWN, $\frac{9}{8}$.)

Boston	Mass	7.02	Bradford	England	3.51
Towns in	do	7.02	Huddersfield	do	6.35
Birmingham	England	6.35	Newcastle-on-Tyne	do	4.94
Sheffield	do	5.56	Sunderland	do	5.97
Dundee	Scotland	7.41	Trieste	Austria	8.
Leith	do	2.96	Charleroi	Belgium	6.90
Portlaw	Ireland	8.	Copenhagen	Denmark	4.26
Londonderry	do	1.85	Elsinore	do	4.04
Pontypool	Wales	3.17	Chaux-de-Fonds	Switzerl'd	3.17
Cardiff	do	3.70	Basle	do	2.96
Stuttgard	Wirtemb'g	5.97	Zurich	do	3.17
Munich	Bavaria	5.56	Messina	Italy	4.44
Cologne	Prussia	6.90	Lyons	France	6.90
Aix-la-Chapelle	do	6.25	Marseilles	do	3.57
Dantzic	do	5.97	Odessa	Russia	.99
Frankfort-on-the-Main		4.44			

GROUP 25—PRINTS, (MERRIMAC, ON COMMON.)

Boston	Mass	9.76	Cologne	Prussia	9.52
Towns in	do	8.	Aix-la-Chapelle	do	6.15
Birmingham	England	6.90	Dusseldorf	do	5.26
Bradford	do	6.35	Elberfeld	do	5.56
Huddersfield	do	5.97	Barmen	do	6.90
Newcastle-on-Tyne	do	6.35	Dantzic	do	8.51
Sunderland	do	7.41	Antwerp	Belgium	5.97
Dundee	Scotland	8.16	Chaux-de-Fonds	Switzerl'd	4.44
Leith	do	6.35	Basle	do	4.35
Pontypool	Wales	5.97	Zurich	do	4.04
Cardiff	do	5.26	Messina	Italy	5.56
Chemnitz	Saxony	5.56	Nice	France	4.26
Dresden	do	8.89	Lyons	do	5.97
Stuttgard	Wirtemb'g	6.35	Marseilles	do	3.41
Munich	Bavaria	7.41	Odessa	Russia	2.96

GROUP 26—BOOTS, (MEN'S HEAVY.)

		pairs.			pairs.
Boston	Mass	.363	Londonderry	Ireland	.490
Towns in	do	.425	Pontypool	Wales	.381
Manchester	England	.366	Cardiff	do	.436
Birmingham	do	.281	Chemnitz	Saxony	.365
Sheffield	do	.325	Dresden	do	.309
Bradford	do	.381	Stuttgard	Wirtemb'g	.309
Huddersfield	do	.354	Munich	Bavaria	.450
Newcastle-on-Tyne	do	.286	Berlin	Prussia	.344
Sunderland	do	.327	Cologne	do	.387
Dundee	Scotland	.490	Aix-la-Chapelle	do	.225
Leith	do	.354	Dusseldorf	do	.303

GROUP 26—*Continued.*

LOCATIONS.	No. of pairs for one dollar . . .	LOCATIONS.	No. of pairs for one dollar . . .
Portlaw ... Ireland	.245	Elberfield ... Denmark	.263
Barmen ... Prussia	.405	Chaux-de-Fonds ... Switzerl'd	.563
Dantzic ... do	.641	Zurich ... do	.900
Frankfort-on-the-Main	.428	Messina ... Italy	.321
Trieste, ... Austria	.675	Nice ... France	.237
Charleroi ... Belgium	.428	Lyons ... do	.450
Copenhagen ... Denmark	.473	Marseilles ... do	.495
Elsinore ... do	.591	Odessa ... Russia	.563

GROUP 27—RENT, (FOUR-ROOMED TENEMENTS.)

	days.		days.
Boston ... Mass.	1.41	Dusseldorf ... Prussia	3.13
Towns in ... do	3.79	Barmen ... do	5.
Manchester ... England	5.29	Frankfort-on-the-Main	3.36
Birmingham ... do	6.17	Trieste ... Austria	23.40
Sheffield ... do	6.49	Antwerp ... Belgium	3.37
Bradford ... do	5.	Charleroi ... do	2.86
Huddersfield ... do	7.46	Copenhagen ... Denmark	3.03
Sunderland ... do	5.56	Elsinore ... do	7.29
Nottingham ... do	6.97	Chaux-de-Fonds ... Switzerl'd	2.39
Dundee ... Scotland	4.46	Basle ... do	4.48
Leith ... do	7.46	Zurich ... do	7.69
Portlaw ... Ireland	14.00	Palermo ... Italy	6.49
Pontypool ... Wales	9.34	Messina ... do	5.26
Cardiff ... do	5.56	Nice ... France	10.
Dresden ... Saxony	5.35	Lyons ... do	2.70
Stuttgard ... Wirtemb'g	2.	Marseilles ... do	5.40
Munich ... Bavaria	.90	Odessa ... Russia	7.69
Berlin ... Prussia	1.87	Tunis ... Africa	2.70
Cologne ... do	3.75		

GROUP 28—RENT, (SIX-ROOMED TENEMENTS.)

Boston ... Mass.	1.06	Cardiff ... Wales	3.85
Towns in ... do	2.25	Dresden ... Saxony	3.75
Manchester ... England	3.85	Stuttgard ... Wirtemb'g	1.19
Sheffield ... do	4.33	Munich ... Bavaria	.68
Bradford ... do	3.70	Berlin ... Prussia	1.50
Birmingham ... do	3.50	Cologne ... do	2.50
Huddersfield ... do	5.56	Dusseldorf ... do	1.87
Leeds ... do	6.49	Barmen ... do	2.56
Sunderland ... do	2.78	Frankfort-on-the-Main	2.70
Dundee ... Scotland	3.70	Trieste ... Austria	14.28
Leith ... do	4.76	Antwerp ... Belgium	1.19
Portlaw ... Ireland	11.11	Charleroi ... do	1.89
Pontypool ... Wales	6.21	Copenhagen ... Denmark	1.25
Chaux-de-Fonds ... Switzerl'd	2.04	Nice ... France	7.52
Basle ... do	2.45	Lyons ... do	1.79
Zurich ... do	3.85	Marseilles ... do	3.85
Palermo ... Italy	4.35	Odessa ... Russia	.54
Messina ... do	4.03	Tunis ... Africa	2.25

GROUP 29—BOARD, (FOR WORKMEN.)

LOCATIONS.		No. of days for one dollar...	LOCATIONS.		No. of days for one dollar...
Boston	Mass	1.16	Elberfeld	Prussia	2.59
Towns in	do	1.33	Barmen	do	2.50
Sheffield	England	2.16	Dantzic	do	3.45
Bradford	do	1.97	Frankfort-on-the-Main		1.72
Huddersfield	do	2.86	Antwerp	Belgium	1.50
Sunderland	do	1.97	Charleroi	do	4.00
Londonderry	Ireland	2.14	Copenhagen	Denmark	2.35
Dundee	Scotland	1.90	Elsinore	do	2.50
Leith	do	2.33	Chaux-de-Fonds	Switzerl'd	2.50
Pontypool	Wales	2.14	Neufchatel	do	2.50
Cardiff	do	1.97	Basle	do	3.57
Dresden	Saxony	2.66	Zurich	do	2.50
Freiburg	Baden	4.93	Messina	Italy	2.88
Stuttgard	Wirtemb'g	3.33	Nice	France	3.13
Munich	Bavaria	2.59	Lyons	do	.78
Berlin	Prussia	3.03	Marseilles	do	2.22
Cologne	do	2.96	Odessa	Russia	1.24
Aix-la-Chapelle	do	2.27	Tunis	Africa	2.07
Dusseldorf	do	2.59			

GROUP 30—BOARD, (WOMEN IN FACTORIES.)

Boston	Mass	1.64	Dusseldorf	Prussia	3.70
Towns in	do	2.17	Elberfeld	do	3.70
Sheffield	England	3.29	Barmen	do	2.88
Bradford	do	3.70	Dantzic	do	4.38
Huddersfield	do	3.45	Frankfort-on-the-Main		7.81
Londonderry	Ireland	3.45	Charleroi	Belgium	5.32
Dundee	Scotland	3.03	Copenhagen	Denmark	5.
Leith	do	4.	Chaux-de-Fonds	Switzerl'd	3.57
Cardiff	Wales	3.29	Neufchatel	do	3.57
Dresden	Saxony	5.40	Basle	do	5.21
Freiburg	Baden	6.94	Zurich	do	3.70
Stuttgard	Wirtemb'g	5.26	Messina	Italy	3.45
Munich	Bavaria	2.59	Nice	France	3.50
Berlin	Prussia	4.35	Lyons	do	1.04
Cologne	do	4.35	Odessa	Russia	2.08

THE DEFECTS OF THE WAGES SYSTEM, CO-OPERATION ITS CURE.

PHILADELPHIA, *July* 20, 1874.

Commissioner of Statistics of Labor and Agriculture:

DEAR SIR:—I am in receipt of your letter, stating a desire to be placed in communication with persons interested in the subject of labor, for the purpose of securing reliable information on the question.

I also received the report you so kindly forwarded, together with an accompanying letter dated in May, and to similar import.

I have read the report with great satisfaction, recognizing therein the inauguration of a work of the most profound significance to every one who hopes for a better future for the wealth producers of the world.

I feel to congratulate you on the success of the work, not because it is all that may be desired, but because you have done so well with so paltry an appropriation as has been placed at your disposal; and I trust that the Legislature of the State may yet see the *propriety* and *economy* of a far more liberal contribution to this end.

There are two points of the report which struck me as being of especial importance. These are: First, the light you have thrown on the anthracite coal controversy, as between the miners and operators of Schuylkill county.

From the reports of the newspapers, our only source of information up to the time of your investigation, we were taught to believe that the miners were making fortunes at the expense of the public as well as of the owners, and that, furthermore, they were little better than assassins and highwaymen, destitute alike of all honor and intelligence.

Your investigations place the whole matter in a different light, showing very clearly the fallacy of the fortune story, inasmuch as the maximum annual earnings of the best paid miners; those on contract, reach but $643 67; a fortune that but few of the owners would be content with, and that the miners on wages, the next best paid, reach but $461 37 per year.

The grand magnificence of the affluence these fortune making miners enjoy may be imagined from your description of their homes as set forth on page 327 of the report.

Beside this, it appears from this same investigation that, however deficient in honor and intelligence the miners may have been, they were quite up in both to the average of the owners. It is the Bureau we must thank for this knowledge, and the official form in which it is laid before the people of the State.

The next, and the point of most general interest, is that, or, rather those, which indicate the sources and distribution of wealth.

Before referring to these statistical indications, I would observe that, while the wealth-producing power of a people alone is received as the measure of national prosperity, it must be but an imperfect indicator of that condition ; and while these physical resources may be essential factors in the great result, the true standard at last must be found in the equitable distribution of such wealth. Were the aggregate wealth of the nation, now estimated at thirty thousand millions, *thirty times as much,* and those millions concentrated in the hands of a comparative few who use these accumulated resources to still further centralization of wealth, and which must as an inevitable social as well as mathematical fact, be offset by a vast majority who have but poverty—nothing like solid prosperity can be affirmed of it. The glitter and show of affluence at points here and there in the social field may, and does, divert our attention from the surrounding misery, privation and want; which in the quiet obscurity to which they must inevitably be consigned—fail to impose themselves upon the public gaze—except at times, under the pressure of the existing wrong, they belch out in quarrels, strikes and sometimes in open rebellion.

This false standard of national prosperity must, in the political economy of the future, take its place as but the secondary element, and be regarded, as it justly should, as a mere incident of social success and not as the success itself. Such systems therefore as fail to recognize this fact, as have been those heretofore received and practiced upon, will be superseded by others in which humanity shall stand before dollars ; and justice in distribution before power of accumulation. And since the first cannot but stimulate the last, by affording not only more comforts, but increased intelligence and better facilities they must tend to reinforce each others hands, and so, swell the totals of both ; and to all which may be added the tendency to break down that pride of wealth, which of all pretensions is the most hollow and impudent as well as pernicious in every aspect.

Again, every thoughtful person on this subject who may take the trouble to analyze it must see that to create a market for the products of industry we have but to increase the purchasing power of the people by more equitable distribution of the wealth which industry alone produces, and thus enable them to supply themselves with the comforts and luxuries which the millions of workers of every nation are now unable to procure for want of this power. With such ability to procure, such a thing as a "glut in the market," so often announced, could never occur, even with production doubled over anything it has yet attained in its total amount. An hundred pair of shoes upon the shelves of a maker in a country village, where one-half the people were barefoot and without power to buy, would be a "glut in the market." But this glut would soon disappear, or rather would never have existed, if the distribution of the rewards of industry had been such that these barefooted people had had the power to buy. It is a significant fact that these "gluts" are always coincident with times of unusual depression; and it is suggestive both of the cause and the remedy.

I have taken the trouble to make some inquiries which throw light on this point, and in direct answer have ascertained that the class to which I am about to refer, namely, persons having the means to provide for their families comfortably, but who make no pretension to shine in fashionable life, require from two to three thousand dollars per year for that purpose, and that against such expenditure no charge of extravagance can justly be made.

This is from four to six times the average annual earnings of skilled mechanics, the best paid wage workers. Now, it is simply preposterous to say that with full purchasing power this would not be a fair average expenditure per family, at least for city life. While there would be, no doubt, those who, through desire to accumulate at the expense of comforts, would live below this rate, such persons would no doubt be offset by the more extravagant class who find ten and twenty thousand dollars too little to meet their desire of display and fashionable dissipation. Now, out of these considerations grow, it seems to me, naturally and logically these four premises:

First. As, in order to procure at all, supplies must first be created, so production is in the natural order the first to be attended to.

Second. Inasmuch as the measure of production is the measure of the industry of every people, we have, to increase that production, to increase this industry.

Third. To keep this measure of industry a constant fact that which is created must be consumed; and

Fourth. To effect this consumption the power of the people to procure the things created must be made to keep pace with their production.

These, it would seem, constitute the prime factors of political economy, in all, at least, that pertains to the physical requirements of mankind. How to put these factors in practical working order, is the question to be solved, and on this point the following considerations may be submitted:

In attempting a solution of this question, we must, if we would end right, start right; and to make this right starting point, is to work a radical change in the economical programme, which is simply this: *That labor must own both its means and its results.* And this in plain language is to strike dead the *wage system*—for while it lasts there is no hope for the industrial masses to surmount that degradation and inadequate reward under which they smart and bleed at every pore. It is but a form of slavery, and as Ira Stewart remarks in an excellent article in the Massachusetts report for 1872–3: "The great motive for making a man a slave was to get his labor, or its results, for nothing; and the abolition of slavery did not demolish this despotism. The motive for employing wage labor is to secure some of its results for nothing; and, in fact, larger fortunes are made out of the profits of wage labor, than out of the profits of slavery." The evidence of this latter fact are abundant on every hand, some of which I will refer to below.

Profits is a term that has grown up from the total or partial ownership of labor, and means that part of labors' yield which is filched from it, and which ultimately appears in the market as capital, and is still further used to repeat the same act for the same end. This being part of the wage system, there is nothing else to expect as long as it lasts, and the inevitable result of its working must appear in the conflicts of the two adverse interests, each struggling for its own advantage, often by means the most unscrupulous and heartless, with little or no regard to the rights of the opposing interest, or to who may suffer. This incessant warfare is a source of constant disturbance, stimulating the worst passions of our nature to activity, and to a resort to all the tricks, low cunning and sharp practice ingenuity can devise; corrupting and debasing the common conscience to a degree not fully to be estimated in its power for mischief.

A scale in one pan of which is placed dollars, and in the other brain, labor, long hours, privation and poor opportunities, cannot, in its poise, award either justice or humanity; and we have not, therefore, any reason to expect it, nor can any patching of the system give more than partial and temporary relief from its miseries, and swinging like a pendulum from one extreme to the other, must fail to afford any permanent relief or give any outlook of hope for the future.

These defects are *inherent in the system*, and we are not to suppose that capitalists, as a class, are either better or worse than the class which works. Man is everywhere the same; nor can any sharp distinction be made between the two classes, they being more or less mixed and inconstant; the shiftings of fortune being such that the representatives of each to-day may change places to-morrow, yet leaving the same average result to the community, the change only affecting individuals, and not the whole body.

This erroneous system, furthermore, shows its debasing influence in the corruption of our political philosophy, giving rise to such maxims as "the greatest good to the greatest number," which is accepted as a political axiom, it being forgotten while using it that it is an implied disregard of of the rights or good of the smallest number. Axioms like this must be evicted from our political conscience before the subject can be discussed with any hope of valuable result, and that better maxim, "the greatest good of all," substituted therefor. The acceptance of such substitution, in itself, would go far to lift political common sense to a higher plane, and aid the work of improvement.

By capitalists, as spoken of in this connection, we are to be understood as treating of those who are mere traders and speculators, and such as put their money into industries in the way of stocks, on the profits of which they may sit in their easy chairs, pull the wires perchance, and open their bags to receive the revenues. By producers, all those who by their manual labor fill the earth with the necessaries of existence, and those who by their more special devotion to the artistic, scientific, æsthetic embellish our homes with the beautiful, unlock the mysteries of nature, and reveal her powers and perhaps her purposes, give us poetry, history, ethics, whose combined industry makes the world better for their having lived in it. While these are to some extent mixed, they are still sufficiently defined to be dealt with as classes, in treating of their effects on the common weal.

The first named are those who tax the world heavily for their support, but who in return give nothing; and they are a class mankind may hope to dispense with, as being neither useful nor ornamental, and entirely too expensive to keep. It is this class too that, coming under the head of such as are supported by the industry of others, will, in the political and social economies of the future, be put in the category of classes with paupers.

To this, the objector may put the question: Do they not work? Are they not planning, devising, &c.? Yes, they work, such work as it is; and so does the burglar work to break open your safe; or the incendiary to fire your dwelling; and so are thousands of others working, where work is utterly destructive, instead of creative. Now, while the capitalist proper, is neither one of these, his work still is unproductive, creating nothing; imagine two capitalists in a desert trading their money, trinkets or clothes with each other, as a source of living, and the result must be apparent, and the objection met.

But how shall labor own both its means and its results? Just in the same way we should prevent a ship from sinking, *stop the leaks*. These leaks, in the form of *profits*, are what deplete the workers to the condition of poverty, while the leakage drips into the other purses to keep them so, and has the same effect upon the industrial mass that bleeding a man every day, after his work, would have upon his power to labor.

Before hinting further as to the remedy, let us look at this leakage a little: On page 47 of the report is a table, showing that, for the year 1870, 34 9 per cent. of the industries of Pennsylvania, manufactures alone being considered, yielded an aggregate (in round numbers) of seven hundred and eleven millions of dollars. Of this total, the materials employed cost four hundred and twenty-one millions of dollars. The wages paid were one hundred and twenty-seven millions of dollars. These two last items taken together, make five hundred and forty-eight millions; which amount being deducted from the total product, leaves one hundred and sixty-three millions of clear profit to capital. Taking this 34.9 per cent. as representative of the entire product of the State, together with the same pro rata of materials employed, and wages paid, the State industries yielded for that year to capital, a profit of over four hundred and sixty millions of dollars.

In Mr. Lorin Blodget's paper, read before the Social Science association April, 1872, as contained in the report, is a statement, on page 419, of the total actual fabrics produced in Philadelphia for the year 1871, which places the money value of such fabrics, exclusive of all mere sales or exchange, at four hundred millions of dollars; and on this amount the clear profit at nearly one hundred millions of dollars. Here again we have a showing in which may be seen the manner in which the distribution of the proceeds of labor is performed. In this case 25 per cent. goes to capital.

From the Auditor General's report of the doings of city passenger railway companies of Philadelphia for 1873, we have the following footings:

Total amount of earnings for fifteen roads, four millons six hundred and twenty-two thousand three hundred and eleven dollars. Expenses incurred, three millions three hundred and fifty-six thousand four hundred and thirty-six dollars. Deducting the expenses from the earnings here, leaves one million two hundred and sixty-five thousand eight hundred and sixty-five dollars, *as the leak to capital.*

As further illustration of the manner and extent of this leakage, we may refer to the case of the Union Mills at Fall river, as set forth in the Massachusetts report for 1873, page 498.

In 1860, this company was organized under the general law, with a paid up capital of one hundred and fifty thousand dollars; the shares were one thousand dollars each, par value, making one hundred and fifty shares. This one hundred and fifty thousand dollars comprises the whole amount of capitel ever paid in. In twelve years from the date of its organization the shares rose, in market value, from one thousand to seven thousand dollars. In these same twelve years the capital of the company, in buildings, improved machinery, &c., rose to *one million* of dollars, and in the meantime another million of dollars was paid in dividends to the shareholders.

Here we have one hundred and fifty thousand dollars growing in twelve years to the enormous sum of two millions of dollars.

It is needless to inquire where all this wealth came from; there being no source other than the labor of those employed.

From this large sum nothing is to be deducted but the original one hundred and fifty thousand dollars. All else, buildings, machinery, materials, wages, superintendence, &c., all paid for aside from it. But then, surely the operatives, whose industry produces so much wealth must have been well paid! Let us see. Inasmuch as this case but illustrates what is being done all the time, both in yield and pay in this same State, and as this same report enlightens us on this point we may refer to it still further.

By reference to table III, wages and earnings in Massachusetts, item, cotton goods, for males above sixteen, the number twelve thousand eight hundred and eighty-six; it will be seen that the average annual earnings are $470 00; while for female it is $264 54. *And this what they got.*

These references and facts show the magnitude of the drain upon labor, and how great is the necessity of these immense revenues remaining in the hands of those who create them in order that something that justifies the name of *living* may be the lot of those who give the world all the comforts and luxuries it has or ever possessed.

But lest this sum of $470 00 per year might appear as the unusual results of labor, we shall find that the average annual proceeds to skilled industry is but little more than this sum for all industries.

Referring again to this fourth annual report and to the footing of the same table, in which the averages for two hundred and forty-two industries are represented; we find that the total annual earnings are but $536 52 for skilled labor by males over sixteen years of age; and that for females above fifteen years, it is $237 22.

By referring to the Pennsylvania report for 1872-3, it appears, as shown in table, page 409, that the total annual earnings of skilled workmen present the average $545 61. These results go to confirm the truth of each other and show how utterly inadequate are these awards as compared with the total results of their skill and industry. Not having sufficient data to arrive at the facts as to agriculture this great branch of productive industry has for the most part to be left out for the present, though we know that average results to wage laborers in this are less than to those in other productive employments.

A reference to the ninth census report United States for 1870, table—, flouring and grist mill products will give some idea of the amount in wealth derived from this source and also where it goes to. As a total of these cereal products we have the sum in dollars worth of (taking round numbers) four hundred and forty-four millions; capital employed, one hundred and fifty-one millions; wages paid, fourteen millions. Here the last two items, capital and wages, amount to one hundred and sixty-four millions of dollars which being deducted from the total product leaves two hundred and eighty millions as profit to capital.

Results so startling as these, and so abundant on every hand, should be sufficient to awaken the attention of every economist and philanthropist to the necessity of an adjustment of the relations of labor and capital, and particularly of those most directly interested in this work—*the workers themselves,* for it is to them at last that we look for its practical achievement.

Being armed with the power to do this, they need but a sufficient knowledge of the facts to quicken their resolution, and of the mode of applying that power to secure the end. The former of these, the Bureaus of Statistics of Labor, are rapidly furnishing them, and as they become more extensively established and more fully invested with power to prosecute their functions, will yet more fully furnish them. I therefore, regard them as among the most hopeful instrumentalities yet set in motion, as means of education on this, the most important branch of man's material interests and the worlds social and political progress.

That this education is now being rapidly secured is evident to every one who is in the habit of attending the meetings of working men, where questions of political economy, finance, banking, exchange, interest and improved production, are discussed with a degree of comprehension and foresight not surpassed anywhere, and when I say that they are in terrible earnest in the work they are doing, I speak from a thirty years' experience with their movements. I know *that they mean business*, with a full realization of the obstacles in the way, which they are determined to remove.

That they are awakened to the necessities of the hour, may be understood from the multitude of labor organizations, with an aggregated membership of not less than two millions now enrolled and every day increasing.

It only remains to consolidate these, now to some extent disconnected bodies, by unification on special points, to harmonize in wise counsels and join their hands to the work. What they have already accomplished in the face of so many embarrassments, both in this country and in Europe, is indicative of what they mean and to some extent, of how they mean to do it. We have a fair example in the Rockdale movement, of what may be done from small beginnings, where a few hungry, ragged men, with but a few pennies in their pockets, met nightly devising the ways and means of economy, and growing to be a prosperous body, owning large mills and stores, and who go into the market to buy from first hands with millions in their pockets, and, even more than all this, have so improved in moral tone and culture from these better conditions, as to become conspicuous examples to all.

The most imposing movement in this country to-day is the "Patrons of Husbandry," with its membership of a million of persons, whose purpose is to "*stop the leaks,*" by bringing producer and consumer into direct contact. A branch, or rather an arm co-ordinate with this is that of the "Sovereigns of Industry." This latter doing for the mechanical industries, what the Patrons of Husbandry are doing for the farmers. Although there is as yet no official connection between these movements, they have a common object, and the men of both know that they are going to win.

What yet remains to be done in this direction is the establishment of labor exchanges at convenient centres, where the products of agricultural and of other industries may meet and be exchanged from first hands, thus dispensing with the army of middlemen.

When, therefore, the great industries of both agriculture and mechanics shall be prosecuted by those who at the same time own their farms, mills, and factories, the leaks will be stopped; and the hundreds of millions of dollars now annually turned over to a few as profits, "who toil not, neither do they spin," will stay where they were created to enrich, and make comfortable homes of those who are now up alleys, in cellars and garrets, in shanties, and hovels of all sorts—in a word co-operation, joint stock with joint industry.

If the gamblers in gold, speculators in stocks, mere traders and jobbers, men who get up corners in the market, to bleed the community, and who upset at times the commerce and manufactures of the nation, and throw into unwilling idleness countless thousands of working men and women, with its consequent privation and suffering. If they should find their occupation gone, there will still be left, no doubt, plenty of government land on which they may work out their redemption, as well as earn their bread.

To the suggestion of co-operation as the means of extrication of the workers from the oppressions of wage labor, it is a common objection, "Oh! they have no capital." To an extent this objection is valid; nor are they likely to have so long as the wage system prevails. But this objection implies that capital is something distinct from labor, *which it is really not;* but only a part of labor filched away into other hands. And as if to add insult to injury, it comes to confront industry with an assumed mastery to dictate the terms upon which it (industry) may work.

To this it may be further objected that such cannot be the result, because profits cease with the suspension of production. As a rule this may also be true; but it sometimes happens that capital finds it to its interest to suspend production; as is the case at this very hour, when hundreds of millions of dollars are stored away in bonds on interst, while hundreds of thousands of workers are idle, and on the very verge of starvation and violent revolution.

If we shall be told that capital to-day is less remunerative than usual, we have but to reply, that in its greed, which is insatiable, it has over-reached itself; its kites have broken their strings; it played a card that failed to win, and if the disaster was confined to itself alone, it would deserve and receive but little sympathy.

Nobody is foolish enough to pretend that the proletariat of this nation had anything to do in producing the present disaster, while they are by far the greatest sufferers from its effects, and such a statement would subject the one making it to the ridicule of every one outside of a lunatic asylum.

It is a commonplace remark among those who wish co-operative workshops and factories to fail, that the whole scheme is impracticable, because some have failed. But what is capital doing all this time? Is it not itself doing this very thing which it declares impracticable for industry to do? What is a bank, an insurance company, a railroad company, even a manufacturing company, as most of them are constituted? What, indeed, is even a business firm, but a co-operative enterprise? In these and all similar cases, they but make their dollars, co-operate to make other dollars; and why the extension of this co-operative principle, so that the dollars and industries should be in one firm or company, with no adverse interest to each, being in the hands of common owners should be declared impracticable, is difficult to conceive outside of the wish that it might be so.

Instead, therefore, of co-operation being a new measure it is an old one, a practical fact made successful to the extent that co-operators in dollars alone wish it to be the world over. It has proven itself so effective in securing the ends to which it has so far been applied, that the producers of the world are getting quite a conceit of its value and mean to continue and extend its application to their own requirements, come what will.

It is also objected that working men are not sufficiently educated on this point to make co-operation a success. This we have to regret is to a great extent true, but forms no more valid objection to its ultimate success than did a want of education keep back the labor saving machinery of the world, or its telegraphs, railroads and scores of other improvements now indispensable to mankind. Besides, every attempt, even though a failure to secure all desired success, is a means of this needed education; and such failures as do arise, arise more from the combinations of capitalists to break them down than from any inherent defects in the attempts to carry them forward. From the multiplied obstacles from without and within it would be wonderful indeed if more or less failure did not accompany the efforts to establish such enterprises.

Strikes, which are simply outright rebellions against the power of capital, and which seem for the time to be the only available resource for working men, are fearfully expensive to those engaged in them. If the losses incurred by the miners in the long strikes they have maintained were summed up, there is no doubt but that such sum would have been sufficient to have put them in possession of some of the best mines of Schuylkill county, as direct owners. What is true of the miners in this respect is true of those engaged in many other industries—a fact which many are beginning to see.

As a result of the strike so long maintained by the carpet weavers of this city, (Philadelphia,) there has, however, been established a co-operative mill, with twenty looms in active operation, with good prospects of rapid extension and success. This company has organized under the general law of the State as passed at the last session of the Legislature, and with a capital of twenty thousand dollars, at five dollars per share. From a general survey of the field, and taking all things into account, we have reason to be hopeful of the future. Legislative bodies, State and National are giving more heed to the demands of the producing interests than as heretofore, to the mere exchanges of products, and seeing that a political economy which does not take into account the social condition of the workers, is not the kind to fill the bill; but more than all other means are we to look for emancipation to the thorough arousing of the workers themselves to the situation, and the corresponding determination to make it better.

ISAAC REHN.

The writer of the above paper is an educated and scientific gentleman, who has given much thought to the questions he discusses. Some of his theories do not meet our approval, but as indicating the drift of thought and conviction that prevails in quarters that are only unheard because those who entertain them are too sincere and earnest to compromise those convictions for place among the active partisans of the day, but no less likely to wield resistless influence when the abuses of our system incite revolution. It is inserted to show that clear heads and earnest minds are working out these problems, independent of the decrees of Brokers' Boards and Boards of Trade.

We insert the following paper by B. B. Thomas, Esq., to show thatit is not alone those who are regarded, contemptuously, as professional agitators, who demand a new departure in the policy of government, that bears upon the distribution of the rewards of industry. It is hardly necessary to say, in this State, that B. B. Thomas is one of the most active and successful producing business men in it, and that his character, experience and achievements, entitle his opinions to at least respectful hearing:

THE PEOPLE'S WOES.

WHAT ARE THE CAUSES, WHAT THE REMEDIES?

These are questions that are to-day being continually asked, and to my mind, so far as I have heard or read, unanswered to the satisfaction of the questioner.

We are all, no doubt, aware of the fact, that the great industrial interests of the country are in a most deplorable condition, that honest, sober, industrious laboring men, by thousands, with and without families to support, are to-day begging for work, at any compensation that may serve only to keep the wolf from their doors, without the ability to obtain it, and that all mechanical, manufacturing and other wealth producing industries are, to a greater or less degree, paralyzed. Is this as it should be? Are we to understand that this is the legitimate penalty inflicted upon those who suffer for some sin, fault or offense, intentionally or unintentionally committed by them? I think not. Or has the Great Author of our being, notwithstanding the manifestations of his love in the bountiful provisions of nature with which he has surrounded us, reversed the beneficent decree that man in the sweat of his face should eat bread, but instead thereof doom him to eke out a miserable existence in the almshouse, become the recipient of private charity, or to avert starvation, expiate in a prison the penalty of violated law, when he appropriates to himself the crust or bone of his more fortunate neighbor? This, I hope, will not be regarded as a fancy sketch, but considered as a melancholy reality, and to my mind a most terrible responsibility rests somewhere.

A gentleman informed me, that upon a recent visit which he made to the House of Correction, a young able-bodied man applied for admission, which was denied him on the ground that he was able to work to support himself; he stated that he had made every effort to obtain work without success, that his last penny was gone, and that he had resolved rather than starve he would steal and compel that or some similar institution to admit him.

I have been gravely told by some wiseacres when discussing the cause of the troubles which now environ us, and their remedies, that there has been too much work done in the past few years; that we have been getting along too fast; the people (particularly those outside of their own families I suppose they meant) and especially the laboring portion had been living too fast; that it was necessary to check this prosperous and happy condition of things, and that we must come down to hard pan, as these croakers delight to term it, and in order to appreciate the period of prosperity through which we have passed, it is necessary for the people to go hungry, half clad and uncomfortably sheltered for a reasonable period. I have yet to hear these gentry complain of an instance where too much work was accomplished by any laboring man in any one day. If too much work has been accomplished, I should be glad to hear those who complain suggest a remedy. It seems to be a stubborn fact that whether people work or not, they must be supplied with food, clothing and shelter, and the problem is now presented whether it is better economy to supply these necessaries of life to a large proportion of the people, in our almshouses, prisons, or by private charities, or permit them to supply themselves by their own industry.

But I am answered, although these people are willing and anxious to work to obtain the means necessary to support themselves and families, there is no work for them to do, and the only alternatives presented are starvation, pauperism or crime. If this is the normal condition of any portion of humanity, then it seems to me that the Great and all-wise Creator, otherwise so bountiful in his provisions for his creatures, has committed a great mistake in His apportionment of work and workers, and the sooner another war is inaugurated the better, in order that the world may be relieved of its superabundant population. But I am not one of those who believe that these are the causes of, nor that these are the remedies for the troubles which now oppress us, nor do I believe that the great interests of forty millions of people, distributed over a continent teeming with developed and undeveloped wealth to the extent of millions, which figures fail to compute, have been so seriously disturbed by so insignificant a circumstance as the failure of the house of Jay Cook & Co., or the failure of all other houses that followed in their wake ; but I do believe that this terrible gloom, this wide-spread distress which now oppresses every worthy interest of the country is not the effect of errors committed by the people in their domestic, business, social or industrial relations, but is the legitimate and necessary consequence of a most unwise, most corrupt, most rascally administration of a system of government, the most perfect ever devised by human wisdom, the true principals of which, if understood and carried out by the servants of the people, executive, legislative and judicial, would redound to the glory of God and the prosperity and happiness of His creatures.

Whilst the legislative, executive and judicial departments of our government are honored by the presence of many wise, pure and patriotic members, the people are oppressed by the mortifying conviction, that a majority are incompetent, corrupt, professional politicians, many of whom, doubtless, never earned an honest dollar in their lives ; and to such scoundrels, through the influence of party discipline, the most vital interests of the people are confided. The recent political revolution can only be regarded as a rebuke by the honest and discerning portion of our citizens of the faithlessness and corruptions of the party in power, and not an endorsement of principles advocated by the other party. Whether the change will develop only a change of politicians, or whether the prosperity of the people will be promoted thereby, we must wait for time to determine. For my own part, I fear we have very little to hope for from the Congress that has just assembled at Washington, nor the one that will succeed it, for the reasons that the majority of the members are not the fitting representatives of the great industrial and wealth producing interests of the country. If their constituencies were composed almost exclusively of professional politicians, lawyers, bankers, agents of foreign manufacturers, who call themselves importers, they would be the right men in the right places, and we would have in fact, as we have had for a long time, only in name, a representative government.

To the absence of honest, intelligent business men, such as are identified with the industrial, wealth producing avocations in their proper numerical proportions, in our halls of legislation and offices of trust, may we attribute the woes which now afflict the worthy portion of the people, and not as is charged by the shylocks and other croakers, who seem to be permitted, possibly for some wise purpose, to infest our republic; that there has been too much work done in the last few years, that the people, not themselves or their families of course, have been too well fed, too well clothed and too comfortably sheltered. I have yet to hear a farmer, a manufacturer, a laboring man, a merchant, or any other worthy citizen who sympathize with or who feel that they are in any way identified in interest with these worthy avocations, and possessing sufficient intelligence to comprehend the situation, assign such cause for the general depression which now prevails in all labor and other wealth producing interests.

But I am sickened by the cry for hard pan, lower wages for labor, economy to the extent of scarcity of food, clothing and shelter, the deprivation of all comforts, as the remedy which comes up from the moths of society to whom I have alluded, and their subsidized oracles. The New York press, I believe almost without an exception, and I am sorry to say too many of the newspapers of our own city, and other sections of the country, have given themselves to the advocacy of one of the greatest lies, one of the most consummate cheats, one of the most infernal frauds upon public credulity, ever practiced by designing demagogues, or suggested by financial fossils. I mean the myth called specie payments, as well as the advocacy of that bane of families, communities, states and nations which encourages dependence upon others for those elements of subsistence and comfort which, with proper effort, energy and industry, we should produce for ourselves, from our own soil, from our own mines, and other resources of our own, and thereby, whether as families, States or nations, augment our comforts, our wealth and our influence.

To these propositions I challenge denial, and defy controversy, and I give it as my deliberate and honest, though humble opinion, that the great industrial interests of the country, the bone and sinew of the republic, are suffering to-day to an extent unprecedented, in consequence of the theories enunciated by such financiers as M'Cullough & Co , and such statesmen as Wells & Co., and the apprehensions of the people that these theories will assume the shape of laws through the agency of a Congress which understands but little and cares less, in regard to the most vital interests of the people.

But it may be asked cannot a Congress be chosen that will represent honestly and intelligently these great interests? I fear not, under the ban of party discipline and dictation, nor until the people are influenced more by the pledges of those asking their votes, in regard to important principles and measures, and the honesty and capacity of the aspirant, and less by their fancied obligations to party.

But I am continually reminded that the pledges of politicians when asking for votes, cannot be relied upon. If the Republican party wishes to redeem itself during the short period of power which remains to it during the present session of Congress, let it pass a few salutary acts which will inure to the perpetual prosperity and safety of the people, and redound to its own glory, among which let it pass as early as possible the following, which I suggest as a complete and perfect remedy for all our present woes.

First. An act to protect the people against the faithlessness of their public servants. This act should state, that faithlessness on the part of the peoples' representatives in any legislative, executive or judicial department, of a republican government, and any violation of pledges and promises made by said representatives to their constituents, constitutes the highest crime known to a civilized people. As I am opposed to hanging even for this offense, I would suggest imprisonment in the penitentiary at hard labor for a period not less than twenty years nor more than fifty years, and confiscation to the Government of all the property of the culprit. I hope some honest Congressman may introduce such a bill, and I am persuaded no honest member of the Senate or House will vote against it. Such a law, I think, would secure to the people what they have so long lacked and longed for, a representative government, and the question would not be asked of the candidate whether he is a member of this party or that, but whether he is in favor of and will employ his best efforts to promote the adoption of this measure or that. In the event of violation of pledges, sufficient evidence to convict would be easily obtained by any constituent who might prosecute. Should Congress during the present session pass such a law as this, I have no doubt the Legislatures of the different States will very soon follow suit, and the people may hope to enjoy the blessing of a representative government and comparatively honest legislation, federal, state and municipal.

Second. An act fixing and defining the government status of gold and silver, either in coin or bullion. This act should state that, notwithstanding the advanced civilization and intelligence of the people of the United States, they have hitherto, in common with other civilized nations of the world, persisted in the worship of graven images, in the use of gold and silver coins as a representative of wealth and basis of values, contrary to every principal of true economy, sound policy and intelligent judgment.

That gold and silver, unlike almost every other substance, such as iron, limestone, clay, sand, &c., possesses comparatively no intrinsic value, from the fact that they do not, like iron, limestone, &c., afford an equivalent in domestic economy for the cost of their production, that they are valuable only to the extent of their use therefor, in the arts, and for ornamentation, and that any value beyond this accorded to them is arbitrary and fictitious, and should not, therefore, be made the representative of wealth, nor the basis of values, and that this government henceforth ignores them as such, regardless of the estimation in which they are held, or the value attached to them by any other civilized or savage community on the surface of the earth.

Third. An act to repeal all acts by which the government repudiates its own authorized circulation, greenbacks and national bank notes, by providing one kind of money for the government, and another kind for the people. This act should provide for the payment of all debts and dues to the government (including duties on imports) in greenbacks, national bank notes or coin. In less than two weeks from the enactment of such a law, we would find gold at par with currency or possibly below par, and the government under no apprehensions as to an ample supply for all requirements ; nobody suffering thereby, except perhaps a few gold gamblers.

Fourth. An act to provide for an indiscriminate increase of all duties on imports equivalent to the present premium on gold, say 12½ per cent., to maintain the present protection to American labor and American enterprise, a principal which, when understood, should be dear to every useful and patriotic citizen of the country, and distasteful to our European competitors, their allies, and the moths of society only.

Fifth. An act to further reduce, or totally neutralize our present disabilities, as competitors with foreign countries, resulting as well from inequality of rates of interest, as from the inequality of wages of labor. This act should state, that in consequence of the absurd idea heretofore entertained, that substances are valuable in proportion to their scarcity or cost of production, gold and silver, when coined, have been made to perform the offices of representatives of value, and mediums of exchange, and that the wealth of nations has been estimated in proportions thereof held by each, regardless of their material resources, their inherent capabilities, their extent of domain, the beneficence of the government, the intelligence, prosperity and happiness of the people, their relative capacity to feed, clothe and shelter the human family, (which is all of wealth,) this nation has been made to assume an inferior position in the family of nations, and the prosperity of the people has been seriously affected by periodical panics and monetary difficulties, resulting not from deficiency in material resources, and all the elements of wealth in unequaled profusion, but from an imaginary insufficiency of gold and silver, substances, which possess in themselves little or no intrinsic value. This act should provide for an increase of volume of greenbacks to an extent that would make our *per capita* circulation equal to that of England, France, or any other nation, say not less than twenty-five dollars to each human being within the borders of the Republic, which would make the present volume about one thousand millions of paper money, beside that of less value because more inconvenient, and the volume of which less susceptible of control—I mean the gold and silver coin, which would be forced from their hiding places, and made to take their position in the volume of circulation. Let the people understand that this proportion of circulation will be continued, that the volume will be periodically increased as the population increases, that we will have what we have not had heretofore, a monetary *system* that shall not be tampered with at every session of Congress by politicians, to subserve the interest of a few shylocks, to the great detriment of every worthy interest of the country. I have said that this thing called specie payments, the apprehensions of which are casting such a sickening and oppressive pall over the energies, industries and enterprises of the people, is and always has been a lie, a cheat and a fraud on public credulity; such a thing never has existed nor do I believe ever will exist in the true sense of the term, when the banks would or could pay specie in redemption of their notes, when the people in moderate sums, asked them to do so. There never has been a day in the history of banks during my recollection, that I would not have been willing to take the contract for the small sum of twelve dollars and fifty cents, to cause all the banks in the Union from the St. Lawrence to the Gulf of Mexico, and from the Atlantic to the Pacific Ocean, to suspend and close their doors; which would be followed by the usual panic, bankruptcy and distress among all worthy interests of the country, and the only parties benefited thereby would probably be the shylocks, sheriffs, constables, courts and lawyers, the politicians would also be benefited by the necessity for legislation to authorize suspension.

It is hardly necessary for me to state the process by which so great a national achievement could be accomplished at so trifling expense, but I will for the benefit of enterprising young men, who may wish to invest in the event that the parties just enumerated should succeed during the present, or any succeeding session of Congress, in persuading their servants, the President, and a majority of their representatives to pass a law, compelling what, in the simplicity of their souls, they call specie payments; the process is simply this: Employ fifty men, who have pretty good clothes to put on, for one hour—from 9 to 10 A. M.—at twenty-five cents each, to bring themselves up in line in front of the best bank in the city, this number would probably be very soon increased to one or two hundred. As soon as lightning could communicate the fact, every bank in the city, State and nation would be in possession of the awful intelligence that there is a run on the banks, and simultaneously, every bank in the Union would display on its front door a card, on which would be written the ominous words, "*This Bank has Suspended.*"

Is it possible that a system such as this, after the sad experience through which the country has repeatedly passed, is again to be forced upon the people? a system, the mere apprehensions of which are to-day, as they have been for months past, paralyzing every worthy avocation, and reducing to beggary, starvation or crime, many of the most worthy members of the community. If such nauseating nonsense as is contained in that part of the President's message, and the report of the Secretary of the Treasury, as refers to the question of finance, should not so thoroughly disgust, if necessary, two-third of both houses of Congress, as to cause them to rebuke, with becoming emphasis, such absurd propositions, the people may tremble for the consequences. These gentlemen seem to echo the wishes of the moths of society, and seem totally unmindful of the interests of the bees in the great human hive, which has been too long confided partially to their keeping; they seem to be haunted by innumerable ghastly spectres, clothed in filthy bank rags and irredeemable promises to pay, while the more worthy, matter-of-fact portions of the population, those engaged in honest toil, agriculture, manufacture and commerce, and all wealth producing avocations, have been felicitating themselves in theconviction that has been forced upon them, by observation and a very gratifying experience, that these bank rags, this denounced currency, is the most convenient, most safe, most reliable ever vouchsafed to any people, although it may have been like many other valuable inventions and suggestions, the offspring of necessity.

I take issue with the President and his Secretary when they declare that our greenbacks, as a circulating medium of exchange and representative of wealth, is not desired, and was not intended by the people to be perpetual; that they are unstable and fluctuating in value, that they necessarily occasion undue speculation, over-trading and extravagance; that they are irredeemable, and that therefore the government is disregarding one of its most sacred pledges; and I assert, and defy successful contradiction thereto, that ninety-nine hundredths of the intelligent and useful population of the country desire their continuance, though in augmented volume, that they have always been at par, that they have never fluctuated in value, that they have been stable to an extent that has marked the history of no other currency in the world, that they have been continually and all the time redeemable, and redeemed day by day as the holders might desire, in every element that contributes to the subsistence, the comforts and happiness of the people, and this through and by virtue of the sovereign power and sovereign will of the people as manifested through their Government, regarding the arrangement as necessary for their social well-being, their prosperity and happiness, for which purpose only governments should be instituted, and it is only through and by virtue of this sovereign power and sovereign will that gold and silver are made to answer the purposes of a circulating medium of exchange, and made redeemable like our model currency, in all the requirements of humanity, and not from any intrinsic value it possesses; the idea that it possesses intrinsic value in consequence of the cost of its production, as claimed by the President, is an absurdity, and untenable by any system of logic. That it may again assume its position as a currency co-ordinately with our legal tenders and national bank notes I do not believe the people will object, although it is more expensive, less convenient, and in point of volume less susceptible of control, and therefore less stable; and it will again assume its position as money and enter into circulation as soon as Congress abrogates the silly and mortifying provision of law that makes coin alone receivable for duties on imports ond other debts due the Government.

Withdraw the demand for $200,000,000 annually in gold to pay duties on imports and limit the demand to the sum necessary to pay the interests on bonds held abroad, and you will bring gold immediately down to par or below par, and while the Government is to-day redeeming, and has all the time practically redeemed its authorized circulation, the croakers would then be happy in the fact that the people will possibly be willing to receive a dollar in gold in exchange for a dollar in currency, and every intelligent manufacturer in Europe who has learned something of our great Republic, her immense resources, her intelligent, (and under honest and wise administration of the Government,) happy and prosperous citizens, will be glad to receive our greenbacks in exchange for his merchandise, because he will know that we will receive them again in exchange for our wheat, our corn, our cotton, or any other of our products which he may desire to purchase.

I say to the Congress now assembled, ignore all party affiliations and party influences, and come honestly to the work of benefiting the great body of your constituents, and their emancipation from the terrible gloom which now oppresses them. Pass laws embodying the provisions herein suggested, and you immediately reinstate confidence, you give vitality to business, you give to the laborer immediately the means of subsistence for himself and family, through the agency of honest toil, you arrest the tendency now prevalent to violations of law and respectability of crime, you relieve our almshouses, our prisons and houses of correction of their numerous voluntary occupants, made so by their own application, as a means of subsistence, which, when denied them, their object is attained by a resort to crime. You arrest the further and ruinous depreciation of values of every description of property, real, personal and mixed, whilst the present burdens of taxation continue, and the rates of interest advance; you save debtors from the rapacity of unrelenting creditors, you save from penury widows and orphans whose heritage consists in incumbered estates, railroad stocks, bonds, &c., &c. Realize the fact that the government is at fault when an honest laboring man is unable to obtain work at remunerative wages, that under a system of just laws and an honest administration thereof, no honest, industrious man will diligently seek employment without the ability to obtain it, that labor being the source and developer of wealth, too much cannot be accomplished with a due regard to physical endurance, mental culture and personal comfort, that all worthy interests are prosperous in proportion to the ability of the masses to consume.

In view of these truths, understand that the people cannot expect too much from the government within the pale of wisdom, devotion and patriotism to accomplish. Act promptly on these suggestions, and save from the terrible consequences which I sincerely believe are now impending, that class of people constituting a very small—though very influential—minority, for whose benefit it is very generally believed the majority of Congress at their last session, under the inspiration of the executive, specially acted.

I believe the foregoing are plain, practical, common-sense propositions, and I am so much impressed with their justice, propriety and invulnerability, that I challenge the President, the Secretary of the Treasury, or any of the parties for whom they seem to be specially interested, to a discussion of their merits; and in the language of the President, "I commend them to the careful consideration of Congress," believing that a favorable solution is attainable, and if reached by this Congress, that the present and future generations will ever gratefully remember it as a deliverer from a thraldom of evil and disgrace.

B. B. THOMAS.
430 *Walnut st., Philadelphia.*

Since writing the foregoing, the memorial to Congress of A. K. Owen, C. E., has been handed me, which I have carefully read, and in which I generally concur and heartily unite, and which I commend to the careful consideration of Congress, and sincerely hope the prayers of the petitioner may be promptly and favorably acted upon. Mr. Owen presents an able and exhaustive argument in favor of internal improvements by the general government, and the payment for the same by the further issues of legal tender notes, as a measure of immediate relief and sound policy, the advantages of which, resulting from the development of the country, and its rapid population will inure, not to the favored few with immense corporate rights and privileges, but to all the people. B. B. T.

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